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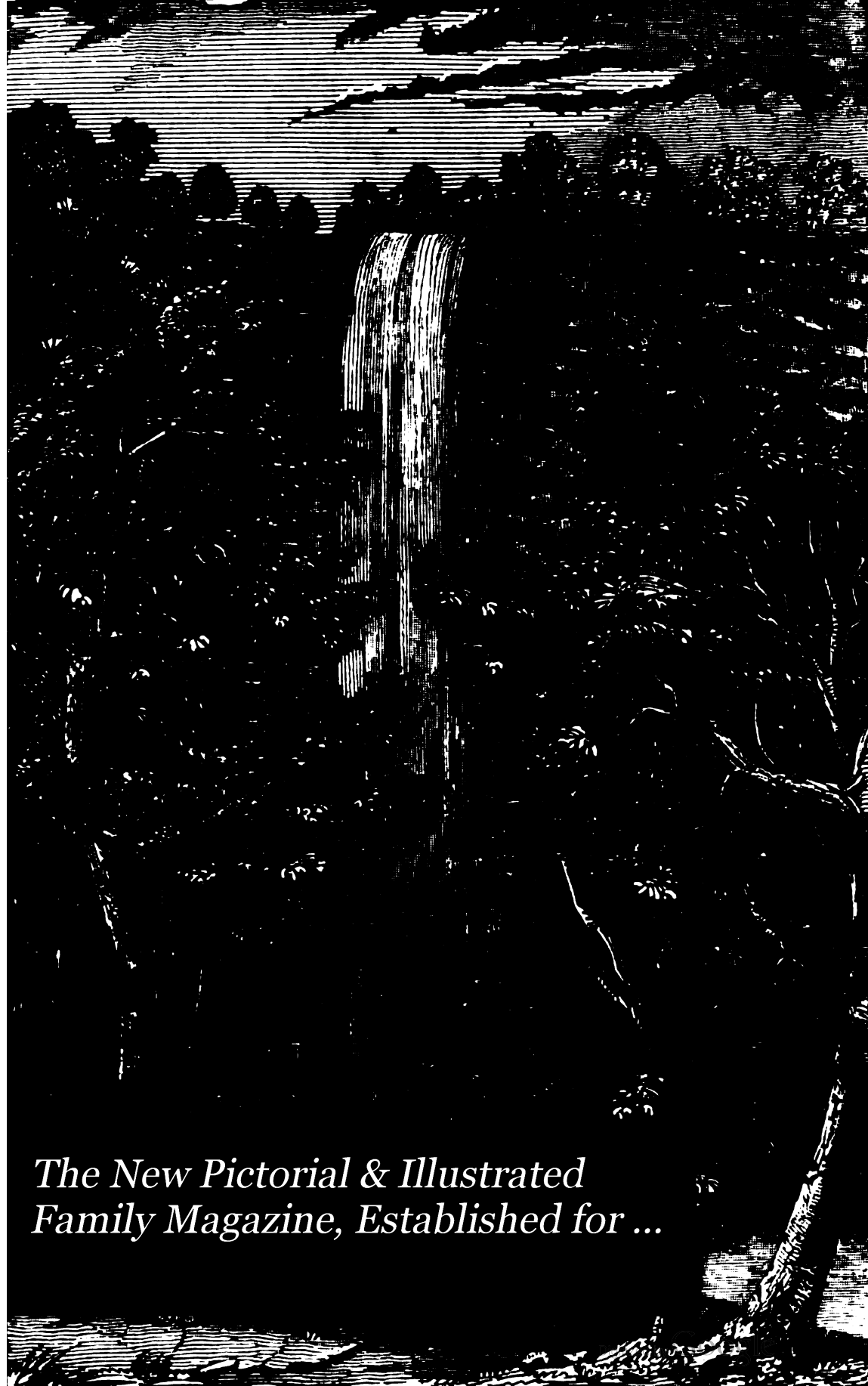
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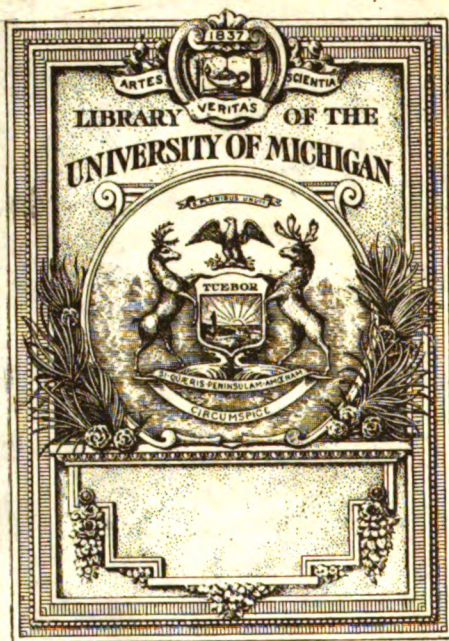
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*The New Pictorial & Illustrated
Family Magazine, Established for ...*



THE GIFT OF
Mrs. William Doty

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N 563



THE

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NEW PICTORIAL

AND

ILLUSTRATED

FAMILY MAGAZINE,

ESTABLISHED FOR

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EDITED BY ROBERT SEARS.

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PREFACE.



It is a trite and oft-repeated observation, that "knowledge is power." It was this that raised Franklin from the humble station of a printer's boy to the first honors of his country ; that took Sherman from his shoemaker's bench, gave him a seat in Congress, and there made his voice to be heard among the wisest and best of his compeers ! It raised Simpson from the weaver's loom to a place among the first of mathematicians, and Herschel, from being a poor fifer's boy in the army, to a station among the first of astronomers. It is the philosopher's stone—the true alchymy that turns everything it touches into gold. It is the sceptre that gives us dominion over nature ; the key that unlocks the storehouse of creation, and opens the treasures of the universe !

The prime object of this Work is to disseminate this knowledge, combining useful information, fitted alike to the capacity of the child and the adult. It is intended also as a depository of valuable stores, garnered up from sources which, from their magnitude, rarity, and costliness, are as sealed fountains to the great mass of the reading community. In this volume, the choicest reading is presented in a condensed form, illustrative of HISTORY, GEOGRAPHY, the FINE ARTS, NATURAL HISTORY, AGRICULTURE and RURAL ECONOMY, ARTS AND SCIENCES, BIOGRAPHY, TRAVELS, &c. ; all of which are illustrated by engravings, several hundred in number—some of which are from original drawings, made expressly for the Work ; thus adding to the interest of the text, by a direct appeal to the eye, conveying a more vivid and accurate impression of the subject than could otherwise be given. Thus the title, "INFORMATION FOR THE PEOPLE," it has been the aim of the editor to sustain by the nature of its contents, comprising the several branches of general knowledge, fitted to supply the means of mental improvement and self-education. "For," says an eminent writer, "of all the amusements that can possibly be imagined for a hard-working man after his daily toil, or in its intervals, there is nothing like reading. It calls for no bodily exertion, of which he has already had enough, or perhaps too much. It relieves his home of its dulness and sameness. It transports him into a livelier and gayer, and more diversified

and interesting scene ; and, while he enjoys himself there, he may forget the evils of the present moment, with the great advantage of finding himself the next day with the money in his pocket, or at least laid out in real necessities and comforts for himself and family, and without a headache. Nay, it accompanies him to his next day's work, and, if what he had been reading be anything above the idlest and lightest, gives him something to think of, besides the mere mechanical drudgery of his every-day occupation—something he can enjoy while absent, and look forward to with pleasure. If I were to pray for a taste which should stand me instead, under every variety of circumstances, and be a source of happiness and cheerfulness to me through life, and a shield against its ills, however things might go amiss and the world frown upon me, it would be a taste for reading."

The cordial welcome with which his former Works have been received, and their widely-extended popularity, induce the editor to cherish the hope that the present volume will be favored with a reception no less flattering to his efforts. In the sincere aim to present a volume of solid, instructive, and entertaining reading, fraught with a direct moral and religious tendency, and thus adapted to improve the heart while it instructs the head—a volume especially suited to the domestic circle, he can not but feel conscious that his labors have in some sort deserved this compliment

R. S.

NEW YORK, 1846.

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FALLS OF TOCCOA, GEO.



to and the scene of the night
reminds one of the poetic descriptions of | Then, growing bolder as our
fairy-land, where we might expect the fays | with the excitement of the sc
and elves to assemble of a moonlight night | vested ourselves of our boots

No. 1.—1

SEARS'

PICTORIAL MAGAZINE.



THE FALL OF TOCCOA.



ged stone wall, and over it

"The brook came babbling down the mountain's side."

The stream had lost much of its fulness from the recent dry weather, and as it became lashed into fury, by its sudden fall, it resembled a silver riband, hung gracefully over the face of the rock, and waving to and fro with the breath of the wind. It reminds one of the poetic descriptions of fairy-land, where we might expect the fays and elves to assemble of a moonlight night

to hold their festival on the green bank, while the spray, clothed with all the varied colors of the rainbow, formed a halo of glory around their heads. It is indeed beautiful, surpassingly beautiful: the tall trees reaching but half way up the mountain height, the silver cascade foaming o'er the brow of the hill, the troubled waves of the mimic sea beneath, the lulling sound of the falling water, and the call of the mountain-birds around you—each and all come with a soothing power upon the heart, which makes you anxious to linger through the long hours of the summer day.

Tearing ourselves away from the enchantment that held us below, we toiled our way up to the top of the fall, using a path that wound around the mountain. When we reached the summit we trusted ourselves to such support as a small tree, which overhangs the precipice, could give us, and looked over into the basin beneath. Then, growing bolder as our spirits rose with the excitement of the scene, we divested ourselves of our boots and stock-

ings, and waded into the stream, until we approached within a few feet of the cascade. This can be done with but little danger, as the brook keeps on the even and unruffled tenor of its way, until just as it takes its lofty plunge into the abyss below.

The height of the fall is now one hundred and eighty-six feet: formerly it was some feet higher, but a portion of the rock was detached some years ago, by the attrition of the water, and its fall has detracted from the perpendicular descent of the stream.

Toccoa forms but one of the beautiful links in the chain of mountain scenery in the northwestern part of Georgia. There may be beheld the grandeur of the lofty Youah, the magnificence and terrific splendor of Tallulah, the quiet and romantic vale of Nacooche, and the thousand brilliant landscapes that adorn and beautify the face of Nature. All these attractions will, doubtless, before another score of years has passed away, make Habersham county and its environs the summer retreat of Georgians from the low country, and help to unite in closer bands the dweller on the seashore and the inhabitant of the mountain.

UPRIGHT, DOWNRIGHT, & STRAIGHT-FORWARD.



It is very common to say of such a man that he is "upright," it is not less common to say of such another that he is "downright," or of a third that he is "straight-forward." Occasionally the same person is said to be both upright and downright, and even straight-forward, all at the same time; and we now and then hear a man called upright one day, downright another, and straight-forward on the next. It would thus seem that the words are to some extent synonymous. It will be found, however, on examination, that they have a

moral meaning as distinct and definable as their more obvious and physical significations. Popular usage, in fact, required three words to express three distinct varieties of character, and adopted these, all of good Saxon descent, to supply the want. Thus a downright man, although he may be an upright one, is not necessarily so, and *vice versa*; and the straight-forward man may possess qualities which are not inherent to, and of necessity existing in, the character of either.

The upright man acts with fairness in all his dealings. He would wrong no man of a farthing. He would not injure his neighbor by word or deed. His fame is pure before the world. His word was never broken; and his promise is as good in the market as another man's bond. He holds up his head, is not ashamed to look anybody in the face, and walking erect in the dignity of conscious honesty, is called upright accordingly.

The downright man may or may not exhibit the same moral rectitude. He may not, strictly speaking, be an upright man; but he does not thereby forfeit his title to be classed among the downright. The phrase implies not so much a moral quality, as a manner and a peculiarity. The upright man may hold his tongue; but the downright man will speak out, loudly and boldly, without fear of the consequences. He always allows his indignation to find vent. He speaks his mind; and if he combines both uprightness and downrightness, call a rogue a rogue, and a lie a lie, and cares not whom he offends by so doing. A great conqueror is, with him, a great murderer; a duellist, an assassin; a fraudulent bankrupt, a robber. He condemns in plain terms what he does not approve, and never deals in inuendoes, "or hints his doubts." Neither will he indulge in courtesies when his mind is full of bitter meanings, and call him an "honorable gentleman," whom he imagines to be the very reverse, nor designate another as his "noble friend," whom in his heart he considers his very ignoble enemy. He has no patience with, or toleration for, any kind of terms which tend to gloss over error. Even where no deception is attempted, he does battle on behalf of plain speaking. When people talk of operatives, he talks

of workmen ; the endearing word "wife" is not banished from his vocabulary for that of "lady ;" and "man" is a word of dignity and significance with him, instead of being degraded to imply something the opposite of a gentleman. If a man who is not habitually downright were to say a tithe of the strong things that he may say with impunity, he would get knocked down for his frankness ; but the very audacity of the downright man takes the world by surprise, and forces it into admiration. It forgives his insolence for the sake of the courage, and the harshness for love of the sincerity. He, moreover, has a clear head for detecting a sophism, and a knack of getting at the gist of a dispute, though it may be swathed about in redundancies and circumlocutions. He clinches an argument with homely common sense, and drives a truth into the mind of an antagonist with as much force and as little ceremony as a carpenter drives a nail into a block. He is a man, to use a very common phrase, who will "stand no nonsense"—and would rather a thousand times be thought rude, boorish, and disagreeable (which he very generally is), than call a spade other than a spade, compromise an opinion, or abandon a prejudice that he had once defended.

In every condition of life, in the very extremity of distress and poverty, a man may be upright, and will be the better for it ; but to be downright is not over prudent in him who has his fortune to make, or any worldly advantages to expect from his fellows. If a man be rich, his downrightness is not much in his way. It may even become ornamental to him, and pass for caustic wit and interesting eccentricity. The worst that will be said of him is, that his ill-nature is extremely piquant and original. If he be poor, it will receive no such honorable appreciation, but be universally condemned as unjustifiable misanthropy. It is rather a dangerous weapon in any one's hands, but doubly dangerous in the grasp of those who have not high birth or station, or the right of rich revenues, to privilege them to wield it.

The straight-forward man has the candor of the downright man without his incivility. He uses clear and intelligible language on all occasions, but does not

hold himself bound to select the harshest phrases which can be found. Integrity also belongs to his character ; but, being more conspicuously marked by straight-forwardness, no one thinks of speaking of his uprightness. The notable points in the straight-forward man are the directness and openness with which he acts in his intercourse with the world. He takes the broad highway, and not the crooked path. His objects may partake of the usual business character of selfishness, but he does not make them worse by attempts to disguise them. No : he says, "I am here a man of business, and pursue my interests, leaving others to do so too, as they have a right to do." Thus everybody knows at once "what he would be at ;" and arrangements are made and bargains struck with half the trouble which they would cost in other hands. Sometimes this straight-forwardness is felt as a little out of taste ; but all are sensible of its being extremely convenient, and generally acknowledge in the long-run that his mode of doing business is the best. It is amusing to see a circumambient man come into dealings with him. He is apt to be confounded by the very transparency of the other's mind. It puts him out. He could manage admirably with one who took cunning ways too, however much he might be upon his guard ; but straight-forwardness is a new mode of fence, and he sinks under it. It is the same way with the sophist and the man who has a bad cause to defend by clever arguments : the arrow-flight directness of his common sense overthrows him at the first encounter.

Straight-forwardness is not always combined with wisdom ; but when it is, it becomes a masterful power. Even by itself it can hardly fail to elevate its possessor in the esteem of mankind. As a rogue is defined to be "a fool with a circumbendibus," so may one who has no bad designs and no circumbendibus about him be said to possess a kind of wisdom. In "Don Quixote," we see straight-forwardness united with hallucinations ; and it is interesting to reflect how that one good quality—the good faith, simplicity, and thorough honesty of the poor hidalgo—makes him respectable amid all his absurdities. Gen-

erally, however, the straightforward man is no fool, but one in whom all the elements are well combined, with a keen eye, a clear head, a good heart, a passionate love of truth, and an unfaltering determination to pursue it.

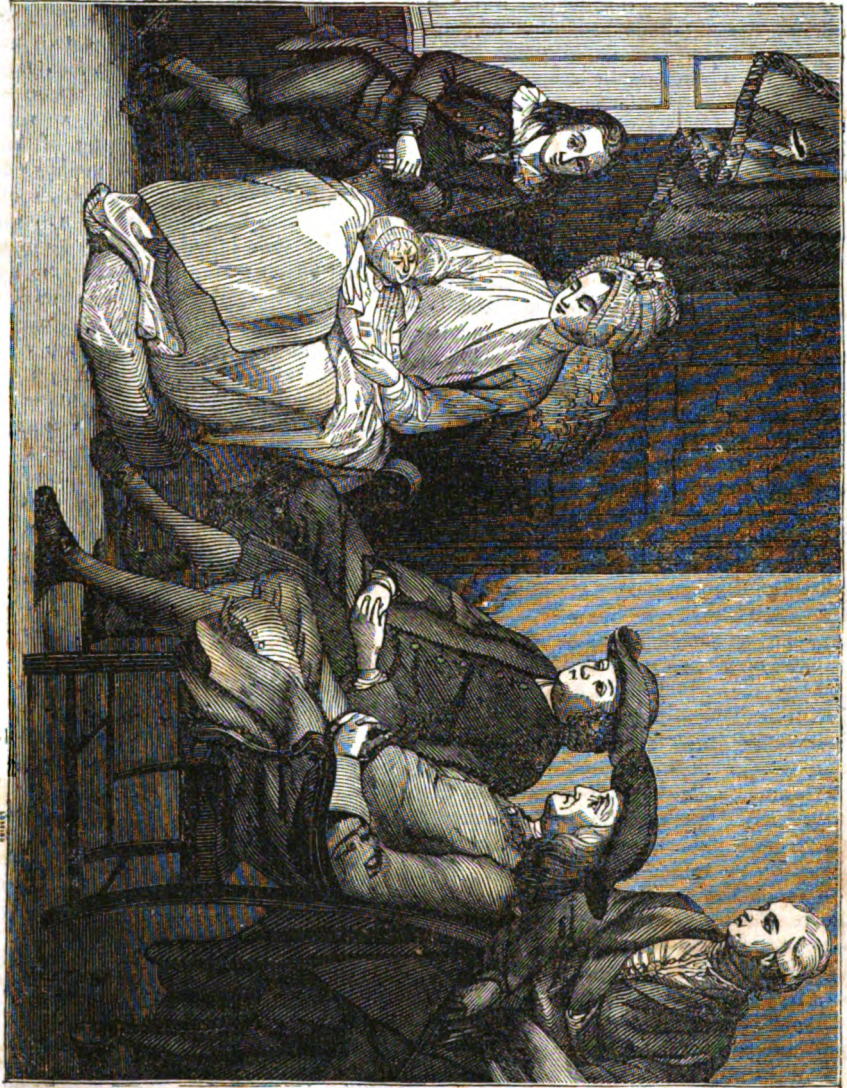
We trust, as the world gets older, upright and straightforward men will increase among us, and downright men become more scarce. The first qualities are unquestionably virtuous; but the last is at the best an unpleasant characteristic. Downright men do not see things quite in their true light. They are oddities in our social scene. The soft words which they deprecate, and which they never will consent to use, what are they but the result of an improved civilization? In a ruder age, when bad actions were more frequent and of a grosser nature than now, it would have been cowardice and baseness in any who could see the evil to speak of it mildly. But now, when a tolerably equal standard of good conduct exists in all classes aiming at being called respectable, and when a vast tribunal instantly condemns any occasional aberration, softer terms are sufficient; and merely to express surprise at any little delinquency, conveys, in these days, a severer reproof than would have been borne two hundred years ago by a violent public declamation.

BENJAMIN WEST.



THE life of BENJAMIN WEST—the distinguished American painter—affords one of those striking illustrations of the triumphs of genius over the circumstances of birth, education, social condition, and the prejudices of custom, which are presented in such bold relief upon almost every page of human history. His birth was within the interior of our then new and sparsely-settled country, where the intercourse between the few cities of the Atlantic coast was ex-

ceedingly infrequent, and where few incentives existed, except the beauties of natural scenery, to develop and foster a taste and genius for the practice of any of the fine arts. His education was of that practical and utile kind so common and so commendable among the excellent sect (the quakers) to which his family belonged; and aside from the *substantial* features which it impressed upon his intellect, it was but little calculated to give wings to imagination, or encourage its flight into the apparently unreal domains of the pictorial art. The social condition of his early years afforded to him none of those stimuli to the pursuit in which he afterward became so pre-eminent, which then as now *propel* (if we may be allowed the expression) the youth of Europe forward in the path of excellence in the arts of design, surrounded as they then were and still are by all the beauties and wonders of ancient and modern art. A few badly-executed prints, such as picture-dealers are wont to display in prominent places because of their gaudy colors, to attract the vulgar eye, was the extent to which young West had been permitted to study the fine arts, when he first took up the pencil and made his initial step toward the temple of fame. And he had prejudices also of the most formidable kind to overcome: at home, the prejudices of his peculiar sect against a pursuit that seemed to foster a vain spirit, and a love for ornament, and worldly-mindedness—a pursuit that seemed to them unnecessary to the welfare of men, and hence measurably sinful. And when finally these home prejudices were overcome, and he was permitted to go abroad, the prejudices of European society were arrayed against Americans. To many, America was a *terra incognita*; and a learned cardinal, to whom young West was introduced in Rome, was astonished to find him *white*, believing all Americans were Indians! And when his superior genius had broken down these prejudices in Italy, and he had fortified himself for coming labors by a zealous study of all that he saw in Rome, Florence, and other depositories of ancient art, and he boldly wended his way to England, he was then obliged to encounter a prejudice of triple force—prejudice against his



The Family of Benjamin West. Painted by himself.

country, his sect, and the peculiar path which he marked out for himself in the pursuit of his vocation. But his superior genius, aided by indomitable perseverance, soon conquered them all, and won for him the crown of universal esteem. Like Angelo, he was not content to follow a beaten track in the mediocre departments of his profession, where doubtless immediate pecuniary reward was far more certain; but he turned his face toward the far-off goal of supreme excellence, and grappled at once and vigorously with the difficulties and duties that beset and devolve upon the laborer in the higher departments of the arts. He turned to the volume of Holy Inspiration, and delved deep into the mines of classic lore, for his subjects; and for thirty years, under the fostering encouragement of George III., he transferred to canvass portraiture of the most remarkable events in the history of our race, with a rapidity and beauty, boldness of conception, and truthfulness of execution, never before witnessed since the days of Buonarroti. And finally, when old age dimmed his eye and palsied his hand, and he quietly and peacefully left his easel and undressed for the grave, the tears of a nation bespoke its love, and his pall was borne by nobles and academicians. Such is the triumph of genius over all that the world calls great and powerful; and by its moral force the child of poverty and even of social wretchedness is irresistibly borne forward to the high places of human grandeur. In view of this fact, let no one faint by the way. Hope on, labor on; let your motto be, "Never give up"—and the prize will assuredly be won.

So well known are all the details of the life of Benjamin West, that we deem it unnecessary to repeat them here; and we have penned the foregoing remarks chiefly for the purpose of introducing a graphic picture of the family of West, from a painting by himself.

AFFECTATION.—Affectation in any part of our carriage, is lighting up a candle to our defect, and never fails to make us be taken notice of, either as wanting sense or as wanting sincerity.

POMPEII AND HERCULANEUM.



RAILWAY carried us from Naples to Annunciata, a small town about two miles from Pompeii.—Here we encountered a motley throng of hackmen, who were as bland as zephyrs toward us, but would turn upon each other with the deep hoarse growl* of a tempest, which we soon lulled to repose by mounting the coach which chanced to be nearest. The instant we were seated, our charioteer cracked his whip and went off at full gallop, singing at the top of his voice one of the wild, sweet, Anacreontic airs of his country, with a spontaneity of soul which assured us that the man had never known an anxious hour or a troubled thought.† We approached the disintegrated city through an avenue of tombs rising above the road on either side. On approaching the gate, the first object to be noticed is an inn, such as country people still, in all the world, know well how to use, in order to lessen the expense of a visit to the city. At each side of the gate are sentry-boxes. Passing within, we found ourselves in one of the principal streets of the city. The houses are generally but one story high; the roofs have quite disappeared, crushed beneath the weight of the volcanic ashes; but the walls stand perfectly firm. The streets are very narrow, and the pavement, composed of pieces of lava, is deeply indented by the wheels of Pompeian carriages. Many of the houses are built of lava, the fiery stream of some ancient eruption, long before the brief records of man began to note the awful voice and action of Vesuvius! Pompeii was destroyed, not by lava, but by ashes—which accounts for the admirable preservation of the objects found

* Exquisitely soft and tender as is the Italian language, its deep guttural sounds are adapted to the most ferocious invective; and it is said to abound more than any other language in disparaging epithets. I never have heard such scolding in any other language.

† This fellow may be taken as a type of the people of this country, who in the enjoyment of the present hour regard neither the past nor the future.

there. The calamity was not so sudden, but that most of the inhabitants were able to save themselves by flight: hence very few human skeletons have been found. From the absence in many of the houses of things which must have been in them at the moment of the disaster, it is supposed that the people seized on what was most precious and carried it with them; or perhaps returned after the work of ruin was done and recovered what they could by excavation. The ashy tempest which buried this fair city raged for more than a week—swept quite across the Mediterranean, and left traces of itself on the distant shores of Egypt. Naples is just the same distance from the volcanic crater as Pompeii, and by a slight variation of circumstances might have been the buried city. Pompeii was once—perhaps at the time of the fatal eruption—on the sea, and its wharves were laved by the river Sarnus. The sea has long since retired to the distance of three fourths of a mile, and the river has shrunk to a mere rivulet. After lying beneath ashes and cinders for sixteen hundred and seventy-six years, indications of its site were accidentally discovered. The excavations were begun in 1755. As yet, but one third of the city has been disinterred; but this has revealed to us objects of the deepest interest—including eighty houses, an immense number of small shops, the public baths, two theatres, two halls of justice called *basilicas*, eight temples, the prison, the amphitheatre, and other public edifices, besides a great number of fountains and tombs.

As you pass these silent and desolate streets, you are curious to learn all that is known of each house. You have your book and your map in your hand, and your guide at your side prepared to supply every deficiency by a ready memory, or by a readier invention. We are now in the street which leads from the gate, at which we entered, to the forum. On our left is a shop where drinks were sold; it has a marble counter, from which the passers-by could take their refreshment without going within. I fear they were in the habit of drinking hot punch in those days; for the circular prints of the hot glasses or other vessels are still distinctly visible on the smooth marble. On the

right stands the house of a musician—on the left, again, a house which belonged to the vestals. Then comes the custom-house, the house of a surgeon, in which were found the instruments already described. In what I might call grocers' shops, the large earthen jars which contained wine, oil, and other articles, are still arranged around the wall. They were not moveable, their contents being dipped up by ladles of which the museum at Naples contains a great many specimens. A baker's shop arrested my attention. The front portion upon the street contained the articles made ready for use. Behind this was the mill for grinding the grain, in the form of a coffee-mill—consisting of a solid cone of very hard lava, fitted to a hollow cone of the same material; still further in the rear are the ovens: so that the whole establishment is quite comprehensive.

The general plan of the houses is that of a quadrangle, built round an open court. Nearly all the rooms open into this court, at the centre of which is a marble fountain or cistern of water, and their only light is derived from the doors. From the small size of the apartments, it is supposed that hospitality could not have been one of the virtues of the Pompeians. They probably, as the inhabitants of those countries still do to a great extent, spent much of their time in the forum, in the public baths, at the theatres, or at the amphitheatre: here they saw everybody, conversed with everybody, and had therefore little motive for social entertainments at their own houses.

The baths of Pompeii are both spacious and splendid. They are divided into three separate apartments: the first for servants and for fires, the second for the use of the women, and the third for the men. All these apartments are beautifully adorned with frescoes, and with figures wrought in stucco, both on the ceilings and on the walls. The basin for cold water is twelve feet and ten inches in diameter, and is lined throughout with white marble. A bronze window-frame was found in one of these baths, containing four beautiful panes of glass, which prove that this elegant comfort was not unknown to the Pompeians. Nor is this the only evidence of their skill in this kind of manufacture: for

a large number of vases, bottles, and glasses of very elegant patterns and beautiful material, have been brought to light. Some idea of the extent and magnificence of these baths may be formed from the fact that one thousand lamps were found here. Imagine these magnificent apartments with their bronzes, their marble statues, their relievoes, all radiant with the light of a thousand lamps, and thronged with a gay and graceful people, in easy flowing costume, breathing the balmy air that was ever breathed without the gates of paradise—and you have a picture of one scene in Pompeian life.

The fact that most of the inhabitants of this unfortunate city were allowed to make their escape from impending ruin, induces us to sympathize all the more tenderly with those ill-fated victims who perished. I have elsewhere alluded to the skeleton of Diomedes, found in his splendid villa without the gate; a still more touching memorial found in the same villa, is believed to be the remains of the mistress of the house and her infant child. The wet ashes had enveloped the mother with the child locked in her arms. There was found every feature and limb of both, exquisitely rounded. Even the linen which had enveloped her young and beautiful form was found adhering to the mould. But nothing of that fair form remained except the skeleton mother clasping her skeleton child—a gold chain about her neck, and gold rings on her bony fingers!

In the prison were found two skeletons with their bones still held by the shackles either of justice or tyranny! In a niche nearer the forum were found the remains of a soldier, his skeleton hand still grasping a lance!

I could not content myself with a single visit, but returned to spend a second day among these unique and deeply interesting ruins. The excavations were then going forward, and I had the pleasure of seeing the walls of a house laid bare, which had been hid from the light of day for eighteen hundred years. The frescoes on these walls were as bright as if the pencil had traced them but yesterday! The excavations are conducted by the government, and the premises are guarded night and day against depredations. Visitors are

always attended by guides authorized by the government.

To explore Herculaneum* is a more difficult enterprise. It was buried beneath solid lava, or if beneath loose ashes and mud, these materials have consolidated into a gray rock, which makes excavation a slow and costly work. Nevertheless, a magnificent theatre, two temples, a portico, and several private houses, were excavated, but all except the theatre have been filled up, and the work is not now in progress. We descended into the theatre, and wandered through its dark spacious caverns—formed by excavation, for it was as completely filled with solid rock as a mould with molten lead. Many interesting and beautiful works of art were found here. The depth of our descent was between seventy and eighty feet below the surface of the rock. The modern town of Portici is built over the buried city; and while exploring the theatre, we could hear carriages rumbling along the street over our heads.

THE BURROWING-OWL AND PRAIRIE-DOG.



VENERABLE ruins—crumbling under the influence of time and vicissitudes of season—are habitually associated with our recollections of the owl; or he is considered as the tenant of sombre forests, whose nocturnal gloom is rendered deeper and more awful by the harsh dissonance of his voice. In poetry he has long been regarded as the appropriate concomitant of darkness and horror. But we are now to make the reader acquainted with an owl to which none of these associations can belong; a bird that, so far from seeking refuge in the ruined habitations of man, fixes its residence within the earth; and instead of concealing itself in solitary recesses of the forest, delights to dwell on

* Accidentally discovered in 1726, in digging a well.

Burrowing Owls and Prairie Dogs.



open plains, in company with animals remarkable for their social disposition, neatness, and order. Instead of sailing heavily forth in the obscurity of the evening or morning twilight, and then retreating to mope away the intervening hours, our owl enjoys the broadest glare of the noontide sun, and flying rapidly along, searches for food or pleasure during the cheerful light of day.

The burrowing-owl resides exclusively in the villages of the marmot or prairie-dog, whose excavations are so commodious as to render it unnecessary that our bird should dig for himself, as he is said to do in other parts of the world, where no burrowing animals exist. These villages are very numerous, and variable in their extent, sometimes covering only a few acres, and at others spreading over the surface of the country for miles together. They are composed of slightly-elevated mounds, having the form of a truncated cone, about two feet in width at base, and seldom rising as high as eighteen inches above the surface of the soil. The entrance is placed either at the top or on the side, and the whole mound is beaten down externally, especially at the summit, resembling a much-used footpath.

From the entrance the passage into the mound descends vertically for one or two feet, and is thence continued obliquely downward, until it terminates in an apartment, within which the industrious marmot constructs, on the approach of the cold season, the comfortable cell for his winter's sleep. This cell, which is composed of fine dry grass, is globular in form, with an opening at top capable of admitting the finger; and the whole is so firmly compacted, that it might, without injury, be rolled over the floor.

It is delightful, during fine weather, to see these lively little creatures sporting about the entrance of their burrows, which are always kept in the neatest repair, and are often inhabited by several individuals. When alarmed, they immediately take refuge in their subterranean chambers; or, if the dreaded danger be not immediately impending, they stand near the brink of the entrance, bravely barking and flourishing their tails, or else sit erect to reconnoitre the movements of the enemy.

In all the prairie-dog villages the burrowing-owl is seen moving briskly about, or else in small flocks scattered among the mounds, and at a distance it may be mistaken for the marmot itself when sitting erect. They manifest but little timidity, and allow themselves to be approached sufficiently close for shooting;—but if alarmed, some or all of them soar away and settle down again at a short distance; if further disturbed, their flight is continued until they are no longer in view, or they descend into their dwellings, whence they are difficult to dislodge.

The burrows into which these owls have been seen to descend, on the plains of the river Platte, where they are most numerous, were evidently excavated by the marmot, whence it has been inferred that they were either common, though unfriendly residents of the same habitation, or that our owl was the sole occupant of a burrow acquired by the right of conquest.

The evidence of this was clearly presented by the ruinous condition of the burrows tenanted by the owl, which were frequently caved in, and their sides channelled by the rains, while the neat and well-preserved mansion of the marmot showed the active care of a skilful and industrious owner. We have no evidence that the owl and marmot habitually resort to one burrow; yet we are assured that a common danger often drives them into the same excavation, where lizards and rattlesnakes also enter for concealment and safety. The owl digs itself a burrow two feet in depth, at the bottom of which its eggs are deposited on a bed of moss, herb-stalks, and dried roots.

The note of our bird is strikingly similar to the cry of the marmot, which sounds like *cheh, cheh*, pronounced several times in rapid succession; and were it not that the burrowing-owls of the West Indies—where no marmots exist—utter the same sound, it might be inferred that the marmot was the unintentional tutor to the young owl: this cry is only uttered as the bird begins its flight. The food of the bird we are describing appears to consist entirely of insects, as, on examination of its stomach, nothing but parts of their hard wing-cases were found.

"CROSS FOLKS."



T is not an uncommon thing to have it whispered through this or that neighborhood, that such a man is "cross in his family." No one knows just how it is exactly. Gentlemanly in his address, polished in manners, constitutionally full of good feelings, and from principle benevolent, yet he is "cross." Some of his friends say he is, his servants will swear to it, something of an irritable temperament shows itself now and then elsewhere, and the man is set down "cross." We have sometimes, in moments when we had nothing else to do, speculated a little upon this matter; and we have asked ourselves whether it were not possible, if the thing were looked to, to show how it *might* be, that the poor man is suffering, if not altogether unjustly, yet where there are very great palliatives for his conduct. We have said to ourselves, "What if it should appear, on examination, that the man is naturally one of the kindest and most generous men in the world; that he bore this character in boyhood, through youth, and in incipient manhood; that he had the quickest sensibility, a mind ever open to see beauty everywhere about him, and a heart to feel it—and he walks amid the beautiful things of the earth one of those who find even amid inanimate creation objects of truth and wonder, and hear lessons of purity and peace; but for the last few years of his life, subtle disease has been preying upon and undermining a naturally sturdy constitution, "playing the deuce" with that most complicated of all things, the nervous system, and through that nervous system thus preying upon that naturally most delicate mind and heart, preparing him exactly to feel most, and in a painful way, all the little annoyances of daily life. And now suppose in addition to all this, he is one still confined to business; and to make the case still more striking, suppose his occupation a daily tax on the brain, either in a profession, or, what is perhaps worse, in the uncomfort-

able elevation of a daily caterer for other men's noddles, in the shape of author or editor, and where, if the thing exists anywhere, he must *not* be disturbed by the ten thousand nettles that an all-wise Providence has scattered along the little by-paths of private life; and for whom things must be arranged *at home*, if they must for any one, in such a way as that the mind *shall* be kept equable and the heart undisturbed.

But now let us suppose that from some cause or other—we will not say what—there is that in his family exactly calculated to nettle and disturb this same nervous and diseased mind. Suppose him poor, and yet his expense is large; independent in feeling, but dependent by necessity; fond of *order* in the household, but yet has a sick companion; perfect in heart and spirit, but yet physically incapable of securing this; overwhelmed with visitors, whose tastes and habits are no more like his than chalk to Dutch cheese, or visited by poor relations, who, true to the nature of the case, must have all notice, and thank you for nothing: now suppose all this, or forty other things we might easily sum up if we had time, were by some combination to meet in the circumstances of this same individual—the very things to *make* him cross—and where is the man, woman, or child, who would not look with a little more compassion on this "cross man in his family," or perhaps judge with a little softer judgment on his weakness and deficiencies? Now let it not be supposed we apologize for sin in any shape, or for any of the little deformities of social life. All wrong is blameable. Yet is there not that, often out of the way of the world's eyes, in the conditions of men, which brings down our harsh judgments on them like thunderbolts, when they ought rather to fall in the shape of the dews of heavenly forgiveness—and which would, if we look for it, rather inspire with feelings of benevolence, yes, even *love*, where possibly we have only indulged in those of distrust and resentment? It will not hurt us, just to think of this: and as we are among those who are trying to think for the good as well as amusement of our readers, we have picked up these few truths passing along this

morning to our office, and we scratch them down "for the benefit of all those whom it may concern."

THE PORPOISE.

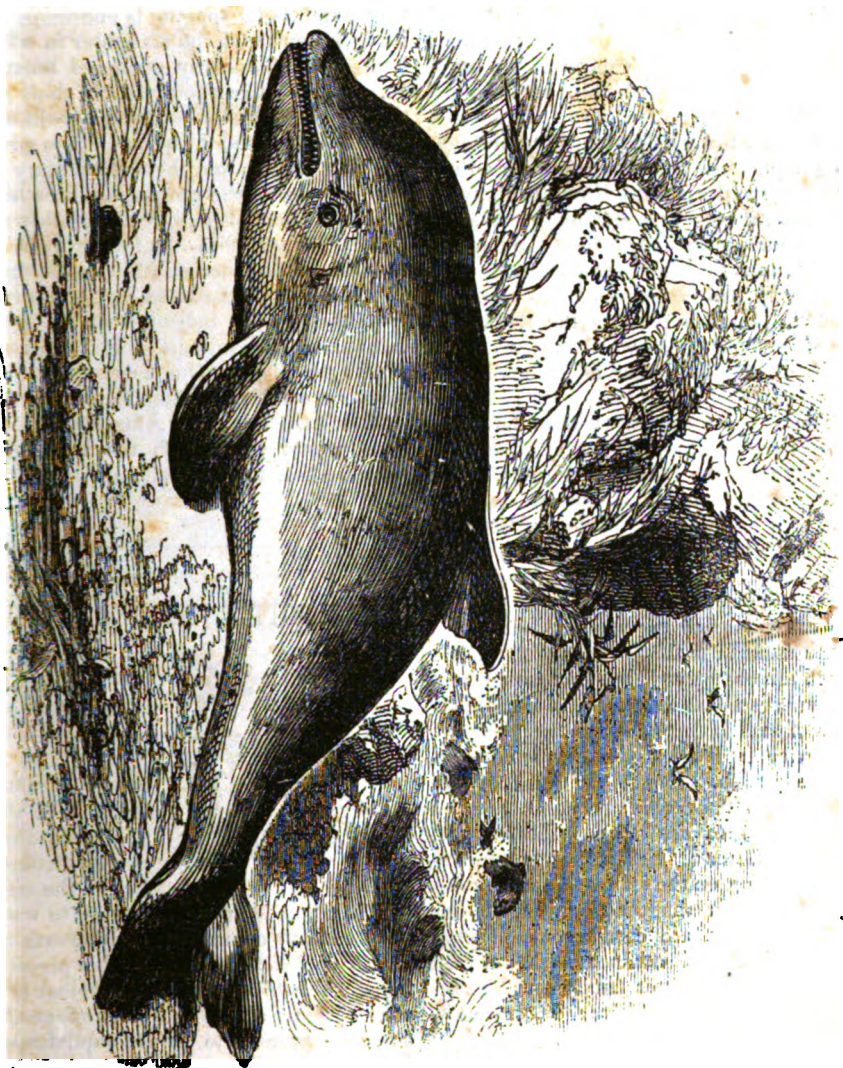


THE *Cetacea* (an order of *Mammalia* comprising the whale, the grampus, the porpoise, &c.) were formerly classed with *fishes*, and in common language still bear that ill-applied title.

Hence we read of the "*whale-fishery*," and of the number of "*fish*" taken upon any occasion. The *Cetacea* are not "*fish*" in any sense of the word. They breathe the atmospheric air by means of lungs; their heart consists of two auricles and two ventricles; their blood is warm; they bring forth living young, and manifest toward them great attachment, nursing and protecting them with remarkable assiduity. As it respects the general form of their body and the construction of their limbs, the *Cetacea* differ considerably from all terrestrial *Mammalia*; and the reason is evident—their exclusive destination to aquatic habits. Terrestrial *Mammalia* are covered with hair, wool, spines, scales, or plates of mail: in the *Cetacea*, we find the skin naked and smooth—a circumstance in strict harmony with their structure and habits. In its general outline, the body has considerable resemblance to that of a fish, being of an oblong form, and terminating in a thick, muscular tail, furnished at the extremity with a horizontal cartilaginous paddle. There are no posterior limbs, and the anterior are modified into the form of short broad oars, which they resemble also in their use. But the great muscular force resides in the tail; its action is not, however, from side to side, as we see in the fish, but up and down, and the reason of this arrangement is very evident: the *Cetacea* breathe air, and are obliged to inspire every few minutes—hence, plunging as they do into great

depths, they are enabled to raise themselves by a succession of vigorous strokes with great rapidity to the surface. What is termed "blowing" by the whale-fishers is nothing more than the forcible expiration of the breath before the animal has reached the surface. Having retained his breath as long as possible, as he ascends he begins to force out, through his nostrils, the pent-up air, which throws aloft the water in a jet or column. The position of the nostrils in the *Cetacea* is well worthy of consideration. Of little use as olfactory organs, they are the exclusive apertures through which the process of breathing takes place. In other *Mammalia*, the nostrils are placed at the extremity of the muzzle, but in the *Cetacea* the muzzle or snout is always immersed beneath the surface, and can not well be elevated. Where, then, can these organs be conveniently situated? On that part which, as the animal floats, rises naturally above the surface. They open on the top of the head, and lead, in the whales, into a large sack, where the air, before being expired, is pent up, and whence it is violently expelled by the compression of powerful muscles. The larynx or windpipe is prolonged into the posterior *nares*, or back of the nostrils, in the form of a cone, so that the air is immediately conducted to the lungs through an uninterrupted channel. As it regards the organs of sight and hearing, we may observe that, as in fish, the eye is adapted to the density of the surrounding medium, the cornea being flat, and the crystalline lens globular. The external aperture of the ear is very small, and capable of being closed.

There are two other points, of especial interest, which we can not pass over, general as we intend our remarks to be: we allude to the deposition of a layer of oil or blubber between the skin and muscles, and to the construction of the vertebrae of the neck. There are several uses connected with the mode of life of the *Cetacea* which the layer of blubber between the skin and muscles appears to serve. In the first place, it tends to render their specific gravity lighter, a circumstance of some importance when we consider the immense mass of muscle and bone of which these animals are compacted. It is, however, in the



Purpoise.

true whales that we find the layer of blubber the thickest. These are animals exposed to the rigors of the polar circle, and it would appear to be a means of preserving the vital heat of the body, which might perhaps be otherwise unable to withstand the intensity of the cold. This coating is as bad a conductor of caloric as the fur of the white bear. But the blubber has most probably another use also. It is well known that the whale plunges to an amazing depth, where it has to sustain an extraordinary pressure. Now, to prevent this pressure from paralyzing the muscles and disturbing the functions of the internal organs, must be one of the ends to be kept in view in the economy of this gigantic animal. Such a purpose the thick layer of blubber will well subserve, and such is, no doubt, one of its appointed uses.

The cetacea appear to have no neck. They have no distinct interval of separation between the head and the trunk, yet, if we examine their skeleton, we shall find that they possess the number of cervical vertebræ common to all mammalia, namely, seven. The neck of the giraffe also consists of seven vertebræ. But, in the one case, we find the vertebræ elongated to the utmost; in the other case the whole seven are compacted closely together, and so compressed as to lose the usual appearance of such bones; they scarcely occupy the space, in length, of a single vertebra of the giraffe. Hence the neck of the cetacea is immoveable and solid.

The cetacea are divided into several groups. Some are herbivorous, as the dugong, feeding on the submarine vegetables which grow in shallows or near shore; most, however, are carnivorous, preying on the fish and other tenants of the ocean. To this latter family must be referred the porpoise (*Phocæna communis*, CUVIER).

The porpoise is the smallest of the cetacea, seldom exceeding five feet in length. It frequents, in troops, the bays and inlets of our coast, and especially the mouths of rivers, not unfrequently advancing to a considerable distance up their stream. In such places it is often taken in nets by the fishermen, becoming entrapped while eagerly pursuing its prey. When the shoals

of herring and other fish which periodically visit our coast make their appearance, they are harassed, among other enemies, by this active and voracious animal, which revels in the luxury of a perpetual feast; and, as its appetite is enormous and its digestion rapid, the slaughter in which it appears incessantly occupied must be very great. The peculiarity of their motion results from the horizontal position of the tail paddle, and the up-and-down stroke which it gives; and their momentary appearance is for the purpose of breathing, which accomplished, they plunge down in search of their food. In former days, the flesh of the porpoise was highly esteemed as a delicacy for the table, and was served at public feasts; indeed, it is but lately that it has fallen into disrepute: the turtle usurps its place. Our forefathers must have had a different notion about table delicacies from ourselves; for few, we believe, would now relish the rank, oily, fishy flesh of this animal.

THE BOTTLE TIT AND NEST.



OW delightful it is, on a fine summer's day, when Nature, clad in her gayest robes, inspires us with a joyous and happy feeling, the reflex of the smile

which beams over her own face, to watch her manifold operations, and remark the beauty and discrimination of her proceedings! Whatever may be the object to be attained, how simply, but how effectually, does she proceed to its accomplishment! Behold the delicate downy appendage to the seed of the dandelion (*Leontodon Taraxacum*)! What a beautiful contrivance for their transportation, and how effectually it provides for the object in view, the propagation of the species in a distinct locality! Trace the operations of the insects buzzing and humming around you, and you will find in each something of

Male and Female Horio Tit (*Parus caeruleus*, Linn.) and Nest.



interest, something to be admired. Whether we regard the means by which they obtain their food, the structure of their habitations, the peculiar formations of the different species, their habits, or their powers, we shall find in each that perfect adaptation of means to an end with which all the operations of nature are carried on.

But if we find ourselves so much interested in our researches into the structure of plants, and the proceedings of the inferior animals, how much more are our feelings excited when we see the feathered inhabitants of the air sporting in the beams of the summer sun, their plumage sparkling, and the whole atmosphere filled with their song! We have no reason to doubt that all animals are formed for enjoyment and are happy in their relative situations, but none appear to us so truly joyous, so overflowing with happiness, as the aerial songsters who enliven our country walks and rural villages from morn until night. How gayly does the swallow glide over the waters of the river—now glancing against the rippling stream, and then darting off on a different tack so swiftly as to serve the poet with one of his most approved similes of velocity. From the first dawning of the day, when the lark rises into the firmament, and strains his throat with his clear song, which we hear even when the eye can no longer discern the songster, to the close of evening, we continually hear some one or other of the sweet-voiced warblers; and even at night the poet's own bird, the nightingale, continually cheers the gloom. Indeed, the appearance of the air, full of birds, has inspired many a poet with some beautiful allusion to their habits and pursuits; and our country walks have ever appeared to us to afford their chief pleasure from the universal gayety which the songs of birds from all sides appear to confer on everything around. And we have derived no little amusement and instruction from our researches into the habits and proceedings of the feathered creation. No part of the economy of nature is so full of the curious results of instinct, almost approaching to reason, which is exhibited in the structure of the habitation provided by birds for their shelter and the preservation

of their young. We have been particularly pleased with the delicate structure and peculiar form of the nest of that pretty little bird the "Bottle Tit," or "Long-tailed Titmouse" (*Parus caudatus*); and as we have an opportunity of presenting to our readers an accurate drawing, from a specimen, of the nest of this bird, we shall proceed to a description of it. It is known by other local names, as "Jack-in-a-bottle," "Bottle Tom," &c.

This elegant little animal is about five inches and a half in length. The bill is very short, the head round, and covered with rough erect feathers; it has a very long tail, whence its specific name. It is of a brownish color, with black feathers in the tail edged with white. It is most commonly found in low moist situations that are covered with underwood and interspersed with lofty oaks or elms. Its nest is generally placed in the forked branch of a large tree overhanging the water, and it lays from twelve to eighteen white eggs, spotted with rust color at the larger end, which are smaller than those of any other British bird, with the exception of the golden-crested wren.

This bird is almost incessantly in motion, running up and down the branches of trees in search of food, which consists of the smaller species of insects, also the larvæ and eggs of those that deposit them in the crevices of the bark. In the winter they associate in small flocks of from eight to twelve, and sometimes more, and are kept together by their continual chirping.

Like the nest, their colors assimilate so nearly with the white moss, abundant on trees at that season of the year, that, were it not for their note, it would be difficult to find them. Owing to the length of tail, its flight is undulating and irregular, but most usually very quick, seeming to pass through the air like an arrow. Jesse remarks that the bill becomes harder in the winter than in the summer, as it is then more worn in the act of obtaining food from the frozen ground and hard wood. The sight of this bird is remarkably acute. It flits with the greatest quickness among the branches of trees, and its food consists in a great measure of small insects only to be discerned with a microscope.

ADVANTAGE OF A BOOK.



F all the amusements which can possibly be imagined for a hard-working man, after his daily toil, or in its intervals, there is nothing like reading an entertaining book—supposing him to have a book to read. It calls for no bodily exertion, of which he has had enough, or too much. It relieves his home of its dulness and sameness, which, in nine cases out of ten, is what drives him out to the ale-house, to his own ruin and to his family's. It transports him into a livelier and gayer and more diversified and interesting scene, and while he enjoys himself there he may forget the evils of the present moment fully as much as if he were ever so drunk, with the great advantage of finding himself the next day with the money in his pocket, or at least laid out in real necessities and comforts for himself and his family, and without a headache. Nay, it accompanies him to his next day's work, and if the book he has been reading be anything above the very idlest and lightest, gives him something to think of besides the mere mechanical drudgery of his every-day occupation—something that he can enjoy while absent, and look forward with pleasure to return to. But supposing him to have been fortunate in the choice of his book, and to have alighted upon one really good and of a good class, what a source of domestic enjoyment is laid open! what a bond of family union! He may read it aloud, or make his wife read it, or his eldest boy or girl, or pass it round from hand to hand. All have the benefit of it; all contribute to the gratification of the rest, and a feeling of common interest and pleasure is excited. Nothing unites people like companionship in intellectual enjoyment. It furnishes to each the master-key by which he may avail himself of his privilege as an intellectual being, to—

“Enter the sacred temple of his breast,
And gaze and wander there a ravished guest—
Wander through all the glories of the mind,
Gaze upon all the treasure he shall find.”

And while thus leading him to look within his own bosom for the ultimate sources of his happiness, warns him at the same time to be cautious how he defiles and desecrates that inward and most glorious of temples.

OBERHASLI.



HE valley of Oberhasli is nearly in the centre of Switzerland—in the canton of Berne, and adjoining the cantons of Unterwalden and Uri; from its eastern extremity to the lake of Brienz it is about thirty miles in length, bounded on each side by lofty mountains. The valley terminates in a plain of some extent, at the end where the lake is situated. The Jungfrau, the Aarhorn, and Mount St. Gothard, are not many miles distant. The valley is watered by the Aar, which is formed by two streams that have their source not more than a mile from the sources of the Rhone. The Aar traverses a great part of Switzerland, passing through the valley of Oberhasli, into the lakes of Brienz and Thun, where it becomes navigable. Numerous cataracts pour down the sides of the valley and swell the volume of the Aar. One of them, formed by the Reichenbach, a considerable stream, falls down steep declivities in which it has perforated singular channels for its course. A black sediment is deposited by some of these mountain-torrents, which is used as manure. The natural beauties of this portion of Switzerland attract many visitors, whose disbursements form a source of considerable advantage to the inhabitants. M. Simond speaks with great admiration of the rich and smiling landscapes to be met with in the vale of Hasli. He adds that it is highly cultivated, full of villages and scattered dwellings half hid in trees. It is sheltered from the north winds; and several descriptions of shrubs and fruit-trees, which do not grow in some other parts of Switzerland, are here flourishing



Pass of Oberhasli.

and productive. About fourteen thousand head of cattle are supported in the meadows and Alpine pastures. The exports consist of cattle, cheese, and skins of the chamois and other animals, which are exchanged for corn, wine, salt, manufactured goods, and colonial produce.

Oberhasli forms a bailliage, under the jurisdiction of an officer chosen from among the inhabitants and appointed by the authorities of Berne; the population amounts to about six thousand, and the valley is subdivided into three parishes. The chief town of the valley is Meyringen, which contains six hundred inhabitants.

The inhabitants of Oberhasli are considered to be good specimens of a fine peasantry. They are remarkable for their superior language and manners, their open countenances, their strength, activity, and manly proportions, which are calculated to impress travellers in their favor, though it may be observed that in these respects they have been made the subject of somewhat exaggerated statements. The personal appearance of the women is good, and their natural attractions are increased by a simple and elegant costume. Instances of great longevity are frequent, and may be attributed to the sobriety of habits generally prevalent, as well as to the purity of the air. Gymnastic exercises take place twice in the summer, to which those who reside in the neighboring valleys are invited. According to an old tradition, the inhabitants are the descendants of a colony of Swedes, who established themselves in the valley about the fifth century. The probability of this fact is strongly corroborated by the familiar use of several terms evidently of Swedish origin. The castle of Hasli, which stands on an eminence near Meyringen, is said to have formerly been the residence of one of the first Swedish inhabitants. Before the French revolution, many privileges were enjoyed by the population, for which they were indebted to their voluntary union with the Bernese, in 1334.

The eastern extremity of the valley is divided in two, and in each branch there is a stream, which flows into the Aar. One of these subdivisions of the larger valley affords the only practicable route from the Oberland to Italy by the Grimsel.

This is the pass of Oberhasli represented in the cut. M. Simond mentions a curious fact connected with the Grimsel, in one of the caverns of which a prodigious quantity of the largest crystals ever known was discovered in 1720. He states that some of these crystals weighed from four hundred pounds to eight hundred pounds. The value of the whole was estimated at thirty thousand florins (about twelve thousand dollars). The largest of these crystals, measuring three and a half feet by two and a quarter feet, is in the Cabinet of Natural History in the Garden of Plants at Paris.

One account of the valley of Oberhasli, which we have consulted, states that the population has doubled in the last hundred years, but this increase does not appear to have been attended with any change in the modes of existence, or extension of previous resources; and the consequence has been, that a portion of the population has been driven elsewhere to seek a livelihood, and the armies and workshops of Europe have thus been recruited. The cause of the constant emigration from Switzerland may be explained in the following manner: It is the nature of pasturage to produce food for a much greater number of people than it can employ. In countries strictly pastoral, therefore, many persons will be idle, or at most be very inadequately occupied. When a father has more than one son, those who are not wanted on the farm are powerfully tempted to enroll themselves as soldiers, or to emigrate in some other way, as the only chance of enabling them to marry. The following additional remarks serve still further to elucidate the social condition of the population in those parts of Switzerland which are exclusively pastoral or agricultural: There are no grounds less susceptible of improvement than mountainous pastures. They must necessarily be left chiefly to nature; and when they have been adequately stocked with cattle, little more can be done. The great difficulty in Switzerland, as in Norway, is to procure a sufficient quantity of fodder for the winter support of the cattle which have been fed on the mountains in the summer. For this purpose grass is collected with the greatest care. In places inaccessible to cattle,

the peasant sometimes makes hay with crampons on his feet; in some places grass not three inches high is cut three times a year; and in the valleys the fields are seen shaven as close as a bowling-green, and all the inequalities are clipped as with a pair of scissors. In Switzerland the art of mowing seems to be carried to its highest pitch of perfection. As, however, the improvement of the lands in the valleys must depend principally upon the manure arising from the stock, it is evident that the quantity of hay, and the number of cattle will be mutually limited by each other; and as the population will of course be limited by the produce of the stock, it does not seem possible to increase it beyond a certain point, and that at no great distance.

The extension of manufactures in Switzerland during the war encouraged an increase of the population, and manufactured goods being exchanged for corn, the arable lands were, to a great extent, laid down in grass. On the return of peace, each country endeavored, by prohibitions, to sustain the prosperity of its own manufactures. The result, though unfavorable to all, has not been so to each in an equal degree. The landlords, no longer having so free a market for their produce, have suffered in some cases; in others, manufacturers have been confined to the home-market, and the means of employment being diminished, the land has been burdened with the support of a part of the manufacturing population. This state of things has been severely felt in Switzerland, which stands in need of importations of corn, while the prohibitory system restrains the exportation of manufactures in exchange, and thus injures both the agricultural and manufacturing interests. Many of the Swiss peasantry have emigrated with their families to the United States. They usually embark at Havre; but if they proceeded down the Rhine to Rotterdam by the steamboats, the expense and fatigue of so long an inland journey would be much diminished, though, at the same time, the chance of obtaining an early passage across the Atlantic would not be so great as at Havre.

The inhabitants of the mountainous regions, in every part of Europe, are neces-

sarily frequently impelled to emigrate, if not to other countries, at least to other districts, and if not to settle there, at least to seek for employment at particular seasons. In the north of Derbyshire, England, for instance, where the crops are late in ripening, great numbers participate in the labors of the harvest in the adjoining counties, where it takes place earlier; and by this means they are enabled to avoid that inequality of condition to which the nature of the soil at home would condemn them if dependent upon it alone.

STAR-WORSHIP.



WE do not at all wonder at the idolatry of the ancient heathen. The rude and simple people, whose dwellings were nightly reared upon the breezy hillside, the dewy plain, or in the se-

questered shade of some palmy vale, with minds untaught, and ignorant of that knowledge which was ushered in with the soft swelling anthems of seraphic harmony—is it a wonder that they burned incense unto the queen of heaven, and worshipped the shining hosts that nightly gemmed the mysterious and everlasting blue?

Who that has gazed in the still hour of midnight upon the burnished scenery of the mighty concave above us, and thrilled with the glorious influences of the hour, can wonder at the reverent devotion of those who were unable to look beyond the bright page of creation, to the great Architect who veils his glory with such transcendent splendors?

From childhood our spirit leaped upward as if it would sunder its prison-bars, whenever we gazed on the magnificent banners that float with all their gorgeous blazonry over the dim and shrouded earth. When the sunset faded from the sky, and the last mellow tints were merged in the gathering darkness, with what ecstasy have we watched for the angel sentinels to come forth from their mystic hiding-

places, and fill their diamond lamps with splendors that night had no power to shade! If the soul were joyous in the glad sunlight, and sent forth its answering song to the hymns that made vocal each shadowy dell and echoing thicket—how it soared on the solemn wing of silent thought up to the temple of the Eternal Presence, when night spread out her starry banners, on whose magnificent folds gleamed the insignia of Omnipotence!

Last night the illness of a child called us from sleep, and as we gazed for a moment upon the starlit heavens, it seemed as if a glimpse of the almost-forgotten glory that used to entrance our young spirit, ere it had wrestled with the dark phantoms of care and sorrow, had returned to woo us again to the adoration of bygone days. Waking from the oblivious dews of slumber, and gazing alone upon the glorious heraldry of Omnipotence and wisdom, it seemed as if new mysteries and glories had dawned at once upon our spell-bound vision. All was still and quiet, brooded by the solemn wing of midnight; not a breeze stirred the sleeping foliage; the very brooks murmured softly on their way, as if soothed by the mystic influences of the hour: yet our soul leaped upward on the strong pinion of adoration, as if it had suddenly entered the vestibule of everlasting glory. There were the glorious and far-off stars—the same, that, like the bright eyes of seraphim, smiled on the young spirit's dawning horizon, still shining on, in their radiant and undimmed beauty, and to our enraptured ear weaving the voiceless harmonies of the eternal years.

Far along the northern sky an undefined yet perceptible radiance told that the merry dancers had illumined their festal halls; and the soft shimmering light, that contrasted so faintly with the starlit blue of the southern hemisphere, might well be emitted from the transparent brilliancy of their spirit-robes. For where is the strong philosophy that shall tell us the Indian's theory is not correct, and that the souls of the departed do not hover over the loved place of their abode, or spread their happy pinions along the star-paved galaxy? What are the mysterious influences that thrill our spirits in the dim night-hour, when fancy

spreads before us the shadowy panorama of the past? Do we not hear soft voices that were silent long ago, swelling on the murmuring gale, that whispers so sweetly along the waving thicket, or blends its music with the chiming waves, where the starbeams sleep so gloriously on its silver mirror?

The day is glorious: the hills, forests, and plains—the towering mountains that arrest the thunder-storm in its course, and the deep rolling ocean that lifts itself in boisterous mirth when the hurricane walks in fury over its seething billows—all these proclaim the greatness and majesty of Him who sits upon the circle of eternity: yet awe is mingled with reverence, while the soul acknowledges the great I AM. But when night unfurls her solemn banner over the earth's careworn milllons, and the stars come forth with their shining cressets, filled with splendor from the eternal fount, the spirit mounts on triumphant wing to the high and holy realms of thought. Who shall tell us those beaming orbs, whose smiling rays traverse the unknown fields of space, are not the glorious abode of departed spirits—the resting-place of weary ones, that panted on life's arid desert?—And as the eye traverses from one to another along the arching sky, what yearnings stir the spirit to rise and trace the wisdom and glory of the Creator, in scanning the glittering cohorts that move obedient to his will through the boundless fields of ether! And if the earthly vision were unveiled, might we not see the spirit-messengers winging their shining ways from orb to orb through the azure plains? Well may we muse beneath the starry concave, and breathe our orisons to Him who hath fixed the spheres in their orbits, and traced with wisdom's unerring finger the pathway of worlds unnumbered.

The garish day may claim the soul's best energies, and toil and anxiety weigh down the spirit, but when night reveals the glories of the vast expanse above us, the soul will struggle to rise from the toils of earth, and contemplate the illimitable majesty of Him who called the mighty concourse of worlds from the caverns of darkness, and sent them forth on their shining, linked in their mystic circles, whose golden rings are fastened to the eternal throne!

CARNIVAL AT ROME.



HE Egyptian obelisk that rises dimly in the background of the picture, and whose austere antiquity contrasts poetically with the living bustle, uproar, and enjoyment

of the principal scene, shows that it is a Roman carnival that the artist represents. With the exception of the obelisk, however, and some difference in the architecture of the houses, the engraving equally illustrates the carnival of Naples, or Milan, or Venice, or any other of the large Italian cities. The crowd and confusion, the masquerade characters, their action and grouping, are common to all Italian carnivals on their *good days*; and as these saturnalia are limited, at Rome, to eight days, every carnival-day there may be considered a good one. In the rest of Italy, where carnival continues from the feast of the Epiphany to the beginning of Lent, lasting five or six weeks, only the Thursdays and Sundays are observed for out-of-door displays; and these days are either not well observed at the beginning, or become languid at the close. Within doors, indeed, particularly at Naples a few years ago, carnival used to be kept up with spirit during all its long legitimate period: there being, every night, private masquerades, or masquerades at the opera-house, balls and suppers, and all kinds of feasting and mummeries in uninterrupted succession—and very hard work it was to go through them all!

As soon as this riot of pleasure was over, the doctors, with their gold-headed canes, were seen more constantly abroad, and walking much faster than usual. They had always plenty of work on their hands, being as busy *after* it as milliners and tailors, cooks and confectioners, fiddlers, and dancing-masters, had been *during* carnival. Even in a physical sense, the abstinence and quiet of Lent were indispensable: and during that sober season, when there were no feasting and dancing, and the opera, on the nights in which it was allowed to open, closed at the sober hour of eleven, without any ballet, people had

time to recover themselves, although there annually occurred a few unlucky cases where the long revelling had sown the seeds of consumption or some other incurable disease. But this was carnival indoors. Let us return to our engraving and the streets of Rome.

In the afternoon, about three o'clock, the Corso begins gradually to fill with people—some masked, and some in their usual holiday-dresses—some on foot and some in hired carriages. About an hour later, the equipages of the nobility and gentry swell the crowd; and the open balconies and windows of every house in that long street are crammed full of company, who, for the most part, are not mere spectators, but actors in the ever-varying farce. The carriages and the horses are, for the most part, decked out in a very fine or a very capricious manner; and the anomalies represented in the print, where a coachman, dressed as a Spanish cavalier of the olden times, is driving an old Tabellone or notary, with a huge wine-flask (extended toward a punch on stilts), and a Roman doctor, with "spectacles on nose," while a small-grown punch climbs up the side steps, and a full-grown punchinello, with a squeaking trumpet to his lips, and a sturdy, turbaned Moor, with a banner in his hand, act as footmen—are such amusing contrasts as continually occur, and give the best parts of the drollery to the scene. As these carriages pass through the crowd, at a slow stately pace, those within them address or gesticulate to their friends at the balconies of the houses—or in other carriages—or in the street on foot—and generally pelt them with sugar-plums. This fire is returned by the more stationary actors: and, if you look to the left of the picture, you will see a gentleman and a lady, with uplifted hands, full of sugar-plums, taking aim; and in another balcony, to the right, two gentlemen pelting with much vigor. The greatest part of the fun, after the hodge-podge of costume, lies in this sugar-plum warfare; for what with the noise of French horns and drums, cow-horns and guitars, fifes, fiddles, tambourines, and penny trumpets, and the din of thousands of voices—the masked all squeaking in a conventional carnival falsetto, and the unmasked roar-



Carnival at Rome.

ing at the top of their lungs—no delicate passages of wit can be well heard. It is a point of gallantry, when ladies are fired at, to mix choice bon-bons and sweetmeats, wrapped up in pretty bits of paper, with nice poesies between, about "core" and "amore;" and when people do not mind the expense, they make use only of good eatable sugar-plums with the kernels of sweet almonds and caraway-seeds inside. Wherever these are most scattered there do the little boys and ragamuffins most abound; for the Italians generally have a very sweet tooth, and these poor fellows will run the most imminent risk to fill their stomachs and pockets with *confetti da signore*.* In the course of their carnival operations a broken head or rib, a crushed hand or foot, sometimes occur; but, from their wonderful dexterity, casualties are not numerous. The worst of this sugar-plum fight (and a pretty general evil it is) is, that the poorer or more parsimonious of the revellers, instead of using good plums that cost money, employ villainous hard make-believes, composed of flour and plaster-of-Paris, which hurt, where they hit, almost like stones. This warfare at Rome, however, was spiritless, compared with the carnival campaigns at Naples in our time. The Neapolitans are a magnanimous people in regard to sugar-plums; and then the population is triple that of Rome, with gentry of wealth and substance. There seems to be, however, a gradual decline in the spirit of carnivals, which will probably go out altogether, and be forgotten of men.

TENACITY TO LIFE.



NEN cling to life with an unyielding grasp;—and many, whose greatest ar.noyar.ce is the thought that it will one day escape them, are yet constantly inveighing against it as a thing almost intolerable. They com-

* Gentlemenly sugar-plums.

plain of the path as thorny, rugged, and wearisome, but are ever tormented with the fear that they shall too soon come to its termination. It is a sweet curse, both too long and too short. The days, the months, and the years, they charge with tardiness, and wish them ended—tax invention to the utmost to manufacture wings for the lingering moments—and when they have fled, regret that they made such speed, and wish them back. The moments, when passing, move too slowly: when passed, they have gone too soon. Such is inconsistent man. He impatiently wishes to-day would give place for to-morrow, and yet every successive morrow advances him a step toward the dreaded termination, anxious to try every untried day except the last, impatient to make an acquaintance with every portion of life except its close, in hope to find each successive day more propitious than the past. He quarrels with life because it does not bless him, loves it because it has a blessing for him, and clings to it in hope to evoke that blessing, but seeks it neither with the "spirit nor with the understanding." We must understand what life is, and what it proposes to do for us, in order to make the most of it. They who cherish it for its own sake, as an end and not as a means—do not understand its nature and design. It can not satisfy the vast desires of the immortal mind. They call for more than would ten thousand times exhaust its resources. Men trifle with life by trying to elicit from it donations of enjoyment which it can not give, because it has not the means; they quarrel with it for being so destitute of benevolence as not to give them what it does not possess, and can not command. This is like complaining of a drop of water, because it is not the ocean; or censuring a molehill, because it is not the universe. The man who should mistake the portico for the parlor, and then curse it because it is neither spacious enough nor warm enough to satisfy his expectations, would justly incur ridicule. Life is but the portico of our existence, and he who mistakes it for the whole edifice deserves not to be ridiculed, but to be regarded with some graver emotion, for indeed he has made a disastrous mistake. He will find it too narrow to

satisfy the infinitely-expanding desires of the soul, and cold enough to freeze up its ardor.

Childhood looks forward with anxious expectation to youth; youth, dissatisfied, pants for manhood; disappointed manhood speeds on to old age for the prize, and despairing age looks back censoriously upon the whole course of life, and is vexed that its "wood, hay, and stubble," were not "gold, silver, and precious stones." And yet man is unwilling to part with life, because he has made it his treasure, and has no treasure beyond. But to him who regards life as merely the infancy of his existence, and uses it well, its best quality is, that it has a termination, for that termination is his introduction to a priceless treasure, which he has spent his life in accumulating. The man who has acted well his part, can hail with the liveliest emotions of joy his exit, which leads him out of a field of labor and care into a boundless field of unsullied enjoyment. It becomes mortal man, then, to be wise, to take life for what it is, to remember that it has an end, and compel every period of it to make a donation of happiness to the last hour, to seize upon every day as it passes, and say to it as did the patriarch to the wrestling angel, "I will not let thee go except thou bless me."

THE PALISADES.



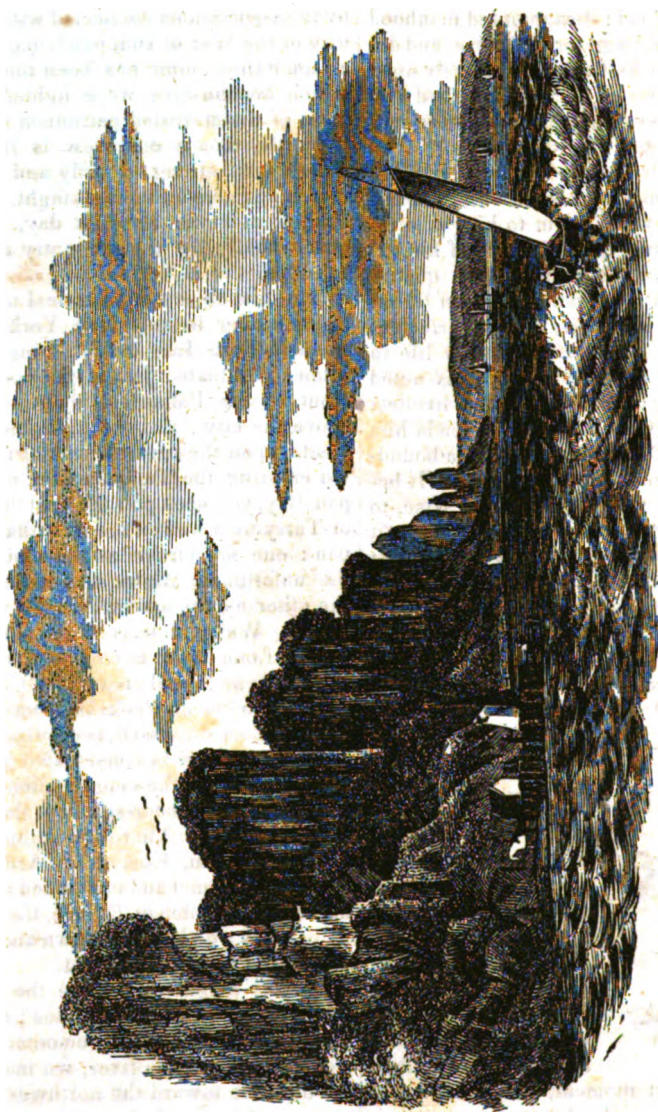
HERE is probably no river in the world whose vicinage, within the same extent, presents such a combination of beauty and grandeur of natural scenery, enriched by historical associations

of the greatest moment, as the HUDSON. From Manhattan island to its junction with the Mohawk, lofty mountains, gently undulating hills, cultivated fields, and beautiful villages and hamlets, alternately meet the eye as we speed along its waters in the swift steamer, all bursting in succession upon the sight like the startling scenes

of a moving panorama. And to the American—to the happy recipient of the boon of liberty—a boon fought for and won by his fathers, and bequeathed to him as a birthright—almost every spot is hallowed by the associations connected with the history of the War of Independence. Many a mountain-summit has been the pyre on which beacon-fires were lighted by the hand of disinterested patriotism; many a plain that meets our view is the place where men, strong in body and stronger in principle, bivouacked at night, and marshalled in battle array at day, ready to strike boldly for their country and their firesides.

The first objects of historical interest to be seen after leaving New York, are the ruins of Forts Lee and Washington: the former is situated just at the commencement of the Palisades, about ten miles above the city; and the latter nearly opposite, upon the eastern bank of the river. On entering the Tappaan Zee, now Tappan Bay, you see upon the east the village of Tarrytown, and on the west that of Tappan: one memorable as the place where the unfortunate Andre was arrested, and the other as the spot where he was executed. We next pass Stony Point, the scene of one of the brave exploits of General Wayne; and reaching Caldwell's Landing, opposite Peekskill, romantic scenery, seldom surpassed, is developed. Every spot on shore is consecrated ground—consecrated by the congregation there of several of the master-spirits of the War of Independence. There at one time Washington, Putnam, Kosciusko, Arnold, and other officers, met and celebrated the birthday of the dauphin of France, the unfortunate Louis who lost his crown and his life during the revolution of '94.

In this neighborhood are the ruins of Forts Montgomery and Clinton; and soon after passing the lofty promontory on the eastern shore of the river, we may see in the distance toward the northwest, on the summit of Mount Independence, the gray walls of Fort Putnam, about four hundred feet above the plain on which stands the military academy of West Point, and about three quarters of a mile distant. The plateau of West Point and its whole neighborhood is classic ground. Here, too, were



View of the Palisades, North River.

congregated the worthies of the revolution; and at this "key to the northern country" Kosciuszko for some time made his residence. Here Arnold formed his plans of treason, and hence despatched Andre on his fatal journey. Here amid the mounds which mark the redoubts of Fort Clinton, arises a monument sacred to the memory of the brave Polish officer; and not far distant is another, erected by General Brown in honor of Colonel Eleazar D. Wood, who fell at the sortie of Fort Erie in 1814. We might multiply our records of the past deeds of bravery and patriotism which this classic spot brings to recollection, and point to the headquarters of Washington at Newburgh; to the crest of Beacon Hill, whereon fires were lighted during the stormy period of our war for liberty; but in so doing we should digress too far from the object of this article—a brief notice of the Palisades, a portion of which is represented in our engraving.

The Palisades are so named from their perpendicular position, and resemblance to columns forming an enclosure. They extend from a point a little north of Hoboken, New Jersey, on the western side of the river, to near Slote creek, a distance of over twenty miles; and present a wall varying in perpendicular height from two hundred to six hundred feet. They form a part of a basaltic ridge which rises at Bergen Point in New Jersey, and gradually increase in height till some of its summits reach an elevation of more than a thousand feet above tide-water. This ridge curves round Tappan Bay, leaving on the margin of the cove a limited but pleasant champagne country, which is in a high state of cultivation. The ridge varies in width from an eighth of a mile to three miles, forming a handsome region of arable table land.

The Palisades are divided into numerous vertical fissures, which give them the appearance of detached columns. In these fissures are frequently found alluvial deposits, from which vegetation shoots forth, the only relief to their bare and mason-work appearance. These basalt rocks comprehend almost every variety of formation: the *amygdaloid*, containing cellules, sometimes empty, and sometimes filled, and often presenting the warty appearance

of slag: the basaltic *brescia* or *trap-tuff*, consisting of pebbles and angular grains cemented; and the *columnar basalt* in prismatic polygons, sometimes articulated, consisting of hornblend, feldspar, and epidote, with which compact and radiated prehnite is sometimes blended.

This wall of "eternal masonry" is beautifully contrasted by the finely-cultivated country on the eastern side of the river, which rises in a gentle slope from the water's edge, and presents at a glance a rich agricultural region, adorned with tasteful mansions. Although here the superior grandeur of the Highlands is wanting, yet the pleasing combination of the majestic and beautiful renders this portion of the scenery of the Hudson river inferior to no other.

ON LONGEVITY.



It is remarkable that amid all that has been said and written on the subject of living a long time, and the rules laid down to attain it, we are as yet far from making the slightest approaches toward a *rationale* of the real causes which are productive in this matter. Nostrums have been sold without number; and books have been written, entitled "Art of prolonging Life," &c., which would seem to indicate, at first sight, that great discoveries had been made on the subject, and the whole at length reduced to rule; but all vanishes and disappears when we come to consider the true import of the expression. It does not mean the art of prolonging the patient's life, but the doctor's—not that of the reader, but that of the author. The wondrous regimen is laid down, not for the sake of the inquirer, but for the sake of himself, who, feeling his life in danger of being shortened, from deficient culinary resources, hit upon this book as a means of prolonging it, and which he therefore very properly calls "Art of prolonging Life," &c.

But although we are ignorant of the re-

tionale in this case, as we are of all the great processes of nature, we know there are some things that must exert a powerful influence upon it—such as temperance, a pure air, regular exercise, an easy mind, to which we may add the influence of religion, and attention to whatever has to do with the inner chymistries of nature, and the laws of organized bodies. Self-denial and virtue are better than all medicines.

And yet we are met at every step with things that puzzle and perplex us. Do we speak of temperance? We are reminded of Parr, who is described as anything but a temperate man, and yet lived above a century and a half; and of Louis Cornaro, who lived a hundred years, although for half that time he had been habitually guilty of such irregular excesses, that his physicians thought it impossible he should live any longer. Do we speak of comfort and regular living? Parr, as mentioned above, and Jenkyns, who lived a hundred and seventy years save one, depended upon charity, which they had to encounter all weathers in soliciting, and which often turned out to be so precarious, that they were not able to obtain it; though this perhaps would fall in with the ideas of some French physicians, who recommend one starvation day in every week, to empty those hollow tubes, and give new impulses to those strings and strainers which Addison so beautifully takes notice of. We are not told whether the old gentlemen leaped or not; but if they had to beg all they lived on, and to fetch it in person, it might be a substitute, and thus they would fall in with the notions of other Frenchmen, who recommend leaping and active exercise before leaving a room, and thus cut short in their beginnings all such like distempers as they supposed to arise from sediment. Do we mention climate as a means of longevity? It is allowed that some climates are distinguished for an insalubrity that shortens human life, while other climates have a tendency to promote it: as while there are no nonagenarians to speak of on the coast of Sierra Leone, the inward parts of Norway are said to be so pure, that the inhabitants live till they are tired even of life. The coast of Devonshire, and the sweet vales of Montpelier, are far more congenial to the human frame

than the marishes of Missolonghi, or the simoom, poison-swept deserts of the East. Climate, however, except in extreme and peculiar cases, has much less specific influence than we are aware. If any one thinks that in this or that particular place man must necessarily inhale the principle of long life, let him cast his eye over the following table, and note the variety of climate in which the several individuals existed, and he will see how things stand in the Old World; and by turning to this continent statistics, he will see how they stand in the New:—

NAME.	AGE.	PLACE.
Albama Marc.....	150.....	Ethiopia.
Titus Fullonia.....	150.....	Benonia.
Abraham Paiba.....	142.....	South Carolina.
Dumitr Raduly.....	140.....	Transylvania.
Countess Desmond.....	140.....	Ireland.
James Sand.....	140.....	Staffordshire.
Wife of ditto.....	120.....	ditto.
Henry Jenkyns.....	169.....	Yorkshire.
Thomas Parr.....	152.....	Shropshire.
Francis Bone.....	121.....	France.
A. Goldsmith.....	142.....	ditto.
Margaret Patten.....	138.....	Scotland.
William Ellis.....	130.....	Liverpool.
Christian Drakenberg.....	146.....	Norway.
Richard Lloyd.....	133.....	Wales.
James Hayley.....	112.....	Cheshire.
John Wilson.....	116.....	Suffolk.
Louis Cornaro.....	100.....	Venice.
Jane Reeve.....	103.....	Essex.
Marquis of Winchester.....	106.....	Hampshire.
Agnes Milburne.....	116.....	London.

In this table, which might have been greatly extended, are included places of almost every variety of soil and climate. Venice, built literally in water; France, with its mild and genial warmth; the fierce and biting winds of Norway; and even the West Indies, proverbial for heats and moisture, being almost specific, as is thought, in cutting down the human stamina—have alike permitted longevity. Jane Reeve lived to a hundred and three, in the marshy county of Essex. Hippocrates lived to a hundred and four, in the delicious island of Cos. Albama Marc reached a hundred and fifty, in the sultry interior of Ethiopia; and Drakenberg reached to within four years of that time, on the sterile mountains of Norway. Such contrasts seem to indicate that climate, except in extreme cases, and where the air is poisoned by the decay of organic matter, or such like causes, has little or no specific influence on longevity, and bid defiance to all efforts at philosophizing on the subject.

If we ask old men the means by which they came to live so long, they give us such different directions in different cases, it is evident they know nothing at all about the matter. Some attribute it to their being much in the open air; some to an extreme regularity in diet and regimen; some to moderate but regular proportions of wine; some advise scarcely to drink at all, not even of that great distillery which God built originally for Adam, the produce of which he might possess without danger, and sip without sorrow: but all amounts to nothing. Some, as Cornaro, advise us to weigh our food, than which nothing can be more absurd; for if this were desirable, surely the Almighty would have blessed us with a pair of scales, or some kind of feeling within that we might know when we had swallowed four ounces—instead of which he has given us a feeling that we might know when we had swallowed enough: and this is the true time to leave off.

This, however, is certain, that every temporary shock which health receives, does something to impair the durability of the human frame; and if so, every act of intemperance, though men feel it not at present, will be found to shorten the duration of the body. And though we may be told of Parr and others, who, though often intemperate, lived to a great age, yet who can say how long they might have lived, if they had conducted themselves on a different plan? There can be no question that their occasional excesses injured them, and that materially; and Parr, it is well known, was cut off at last by intemperance: for being sent for to the king, who wished to see such a monument of antiquity, he indulged in the bounties of a palace, and then went home and died. These men lived a long while, not in consequence of their intemperance, but in spite of it, and would have lived much longer but on that account.

The means known, so far, of promoting longevity, have been usually concentrated in short, pithy sayings—as, “Keep your head cool, and your feet warm”—“work much, and eat little,” &c.: just as if the whole science of human life could be summed up and brought out in a few words, while its great principles were

kept out of sight. One of the best of these sayings is the one given by an Italian in his hundred and sixteenth year, who being asked the means of his living so long, replied with that improvisation for which his country is remarkable:—

“Con mangiar brocoli,
Portar a i pedi seccoli,
In tetto capello,
Pochi pensieri in cervello.”

“When hungry, of the best I eat,
And dry and warm I keep my feet;
I screen my head from sun and rain,
And let few cares perplex my brain.”

The following is about the best theory of the matter: Every man is born with a certain stock of vitality, which can not be increased, but may be husbanded. With this stock he may live *fast* or *slow*—may live *extensively* or *intensively*—may draw his little amount of life over a large space, or narrow it into a contracted one; but when this stock is exhausted, he has no more. He who lives extensively, drinks pure water, avoids all inflammatory diseases, exercises sufficiently but not too laboriously, indulges no exhausting passions, feeds on no exciting material, pursues no debilitating pleasures, avoids all laborious and protracted study, preserves an easy mind, and thus husbands his quantum of vitality—will live considerably longer than he otherwise would do, because he lives slow; while he, on the other hand, who lives intensively—who beverages on liquors and wines, exposes himself to inflammatory diseases or the causes that produce them, labors beyond his strength, visits exciting scenes and indulges exhausting passions, lives on stimulating and highly-seasoned food, is always debilitated by his pleasures, devotes himself to severe and long-continued study, is fretfully and peevishly anxious—is a very poor candidate for a long life, because he lives fast: as too intense a flame consumes rapidly the oil that supported it; and a fire continually blown is exhausted and goes out. In the midst of his days, he is surprised to find the living principle is expended; and a disease, manageable enough in any other case, in his case is unmanageable. He has been drawing so frequently, and such large sums, from the bank of nature, he has drawn out his whole stock, and closed his account.

Reader! it is by keeping these principles in view, and not by any little sayings and recipes for long life, that you learn the great art, if it is an art, of longevity. It is not by "keeping your head cool and your feet warm"—nor by "working much and eating little"—nor by "keeping the mouth shut and the eyes open"—nor by measuring your drink, weighing your food, adjusting your exercise, as for a race-horse, that you are to live a long life. It is by keeping these principles in view—husbanding your little stock of vitality, avoiding what excites and exhausts, not going too often to the bank, living little in much instead of much in little, living extensively, not intensively, not living fast, but living slow; and that by submitting to the principles of the gospel, you will best accomplish all these objects, and learn, moreover, *the art of living for ever.*

BLACK AND GRAY SQUIRRELS.



SQUIRRELS, as might naturally be supposed, are exceedingly numerous in many of the forests of North America, so that squirrel-hunting is one of the favorite and more refined species of sporting among such as devote a day

or two to "hunting-frolics" on particular occasions; not solely for the sordid purposes of gain, but partly as a recreation from other and very different employments. Black and gray squirrels are the most commonly sought after; for, in addition to the fact of their being the most abundant, they are greatly esteemed as an article of food, and their skins are of more value than those of any of the other sorts. A party of five or six sportsmen will often kill two thousand or three thousand squirrels of various sorts in a two or three days' excursion; but your regular backwoods bear and wolf hunter rarely condescends to make war upon this species of small game. Black squirrels are far more abundant than gray ones, but why this is

the case we have never been able to arrive at any satisfactory conclusion; for in their general habits, and their partialities for those sections of the country that produce some peculiar and favorite food, there appears not the slightest difference; and since their size and strength are nearly equal, we can see no good reason for the great disparity in point of numbers. Both the black and gray squirrels are migratory and erratic in their habits; for at particular seasons of the year some sections of the forests will literally swarm with them, while at other times in the same situations but a few solitary stragglers may be seen, leaping from branch to branch in the tops of the tall forest-trees.

The foresight (or by whatever name that instinctive peculiarity common to a large portion of the brute creation may be designated) of the gray squirrel is very remarkable; for although it is more shy and timid than either the black or red ones which frequent the same localities, yet when a season of absolute famine has been approaching, it will run greater risks in committing little depredations upon the granary or corn-crib than would either of the other species. In two or three seasons, when there was an entire failure of beechnuts, chestnuts, and the other sorts of food that these provident inhabitants of the wilderness chiefly subsist upon during the long winters, we had opportunities of becoming convinced of the fact as before stated. "Until the autumn was advancing," says a writer, "I had scarcely seen a gray squirrel in the neighboring woods, but in the month of October I observed a few of them paying occasional visits to my barn and granary; and, not wishing my grain to be stolen or destroyed with impunity, I shot two or three of the earliest intruders. On those occasions I invariably found them carrying off fifteen or twenty grains of Indian corn within the cavities of their cheeks; and being provided with comparatively small cheek-pouches wherein to stow away the pilfered property, it showed to what inconvenience they would subject themselves in order to procure a little stock as the means of sustaining life through a long and rigorous winter. Whether or not the few that had first visited my premises had

Black and Gray Squirrel



communicated the intelligence to their tribe that my barn was stored with such food as they might subsist upon during the approaching famine, of course I have no means of knowing ; however, by the early part of November there were several scores of them paying their daily respects to my corn-crib and wheat-bin. A few red ones, and occasionally a black one or two, would resort to the same scene of plunder ; but I found that they were more intent upon making a meal on the spot, than upon carrying away a necessary supply for the approaching winter. At this time the gray ones were so numerous, and audacious, too, that when I was not at leisure, or felt no inclination to make war upon them with my gun, I had to place a boy as a sentinel to scare them back into the woods, which he sometimes found great difficulty in effecting. In the springs succeeding those seasons of famine, I found hardly any red or black squirrels in the adjoining woods—they had evidently perished through absolute want ; while a number of the gray ones which had been so fortunate as to escape my gun, and that had succeeded in laying in a winter's supply at my expense, might be seen springing from branch to branch, as agile and shy as they had been before the approach of winter ; and could not help blaming myself for having denied a small and temporary pittance to so many of my graceful, sagacious, and provident neighbors.

"Although apparently not well adapted for swimming, yet both gray and black squirrels, in their migratory excursions, will venture across lakes that are one or two miles wide, as well as the largest of the American rivers. In these adventurous exploits they generally take advantage of a favorable breeze, in which case the wind acts upon their elevated tails, thereby rendering the excursion both quicker and less laborious. In the latter part of the summer I have frequently witnessed black squirrels crossing the Niagara river in considerable numbers ; and I always remarked that they swam across when the morning first began to dawn. On reaching the opposite shore they would appear greatly fatigued, and if unmolested would take a long rest preparatory to their setting off for the neighboring woods."

INTERESTING FACTS IN EVAPORATION.



HE reciprocal processes of evaporation and condensation are the means whereby the whole surface of that part of the globe which constitutes land is supplied with the fresh moisture and water necessary to sustain the organization and to maintain the functions of the animal and vegetable world. Thence sap and juice are supplied to vegetables, and fluids to animals ; rivers and lakes are fed, and carry back to the ocean their waters, after supplying the uses of the living world.

The extensive surface of the ocean undergoes a never-ceasing process of evaporation, and dismisses into the atmosphere a quantity of pure water proportionate to its extent of surface and temperature of the air above it, and to the state of that air with respect to saturation. This vapor is carried with currents of air through every part of the atmosphere which surrounds the globe.

When by various meteorological causes the temperature of the air is reduced, it will frequently happen that it will come below that limit at which the suspended vapor is in a state of saturation. A deposition or condensation will therefore take place, and rain or aqueous clouds will be formed. If the condensed vapor collect in spherical drops, it will be precipitated, and fall on the surface of the earth in the form of rain ; but, from some unknown cause it frequently happens that, instead of collecting in drops, the condensed vapor is formed into hollow bubbles, enclosing within them a fluid lighter, bulk for bulk, than the atmosphere. These bubbles are also found to have a repulsive influence on each other, like that of bodies similarly electrified. They float, therefore, in the atmosphere, their mutual repulsion preventing them coalescing so as to form drops. In this state, having by the laws of optics a certain degree of opacity, they become distinctly visible and form clouds.

The vapor suspended in the air during a hot summer's day is so elevated in its

temperature as to be below the point of saturation, and therefore, though the actual quantity suspended be very considerable, yet, while the air is capable of sustaining more, no condensation can take place; but in the evening, after the sun has departed, the source of heat being withdrawn, the temperature of the air undergoes a great depression, and the quantity of vapor suspended in the atmosphere, now at a low temperature, first attains and subsequently passes the point of saturation.

A deposition of moisture then takes place by the condensation of the redundant vapor of the atmosphere, and the small particles of moisture which fall on the surface, coalescing by their natural cohesion, form clear, pellucid drops on the surface of the ground, and are known by the name of dew.

The clouds in which the condensed vesicles of vapor are collected, are affected by an attraction which draws them toward the mountains and highest points of the surface of the earth. Collected there, they undergo a change, by which they form into drops, and are deposited in the form of rain; and hence, by their natural gravitation, they find their way through the pores and interstices of the earth, and in channels along its surface, forming, in the one case, wells and springs in various parts of the earth, where they find a natural exit, or where an artificial exit is given to them, and, in the other case, obeying the form of the surface of the country through which they are carried, they wind in narrow channels, first deepening and widening as they proceed, and are fed by tributary streams until they form into great rivers, or spread into lakes, and at length discharge their waters into the sea.

The process of evaporation is not confined to the sea, but takes place from the surface of the soil, and from all vegetable and animal productions. The showers which fall in summer, first scattered in a thin sheet of moisture over the surface of the country, speedily return to the form of vapor, and carry with them, in the latent form, a quantity of heat, which they take from every object in contact with them—thus moderating the temperature of the earth, and refreshing the animal and vegetable creation.

A remarkable example of evaporation on a large scale is supplied by that great inland sea, the Mediterranean. That natural reservoir of water receives an extraordinary number of large rivers, among which may be mentioned the Nile, the Danube, the Dnieper, the Rhone, the Ebro, the Don, and many others. It has no communication with the ocean, except by the straits of Gibraltar, and there, instead of an outward current, there is a rapid and never-ceasing inward flow of water. We are, therefore, compelled to conclude that the evaporation from the surface of this sea carries off the enormous quantity of water constantly supplied from these sources. This may, in a degree, be accounted for by the fact that the Mediterranean is surrounded by vast tracts of land on every side except the west.* The wind, whether it blow from the south, the north, or from the east, has passed over a considerable extent of land, and is generally in a state, with respect to vapor, considerably below saturation. These dry currents of wind, coming in contact with the surface of the Mediterranean, draw off water with avidity, and passing off, are succeeded by fresh portions of air, which repeat the same process.

CATHEDRAL OF FLORENCE.



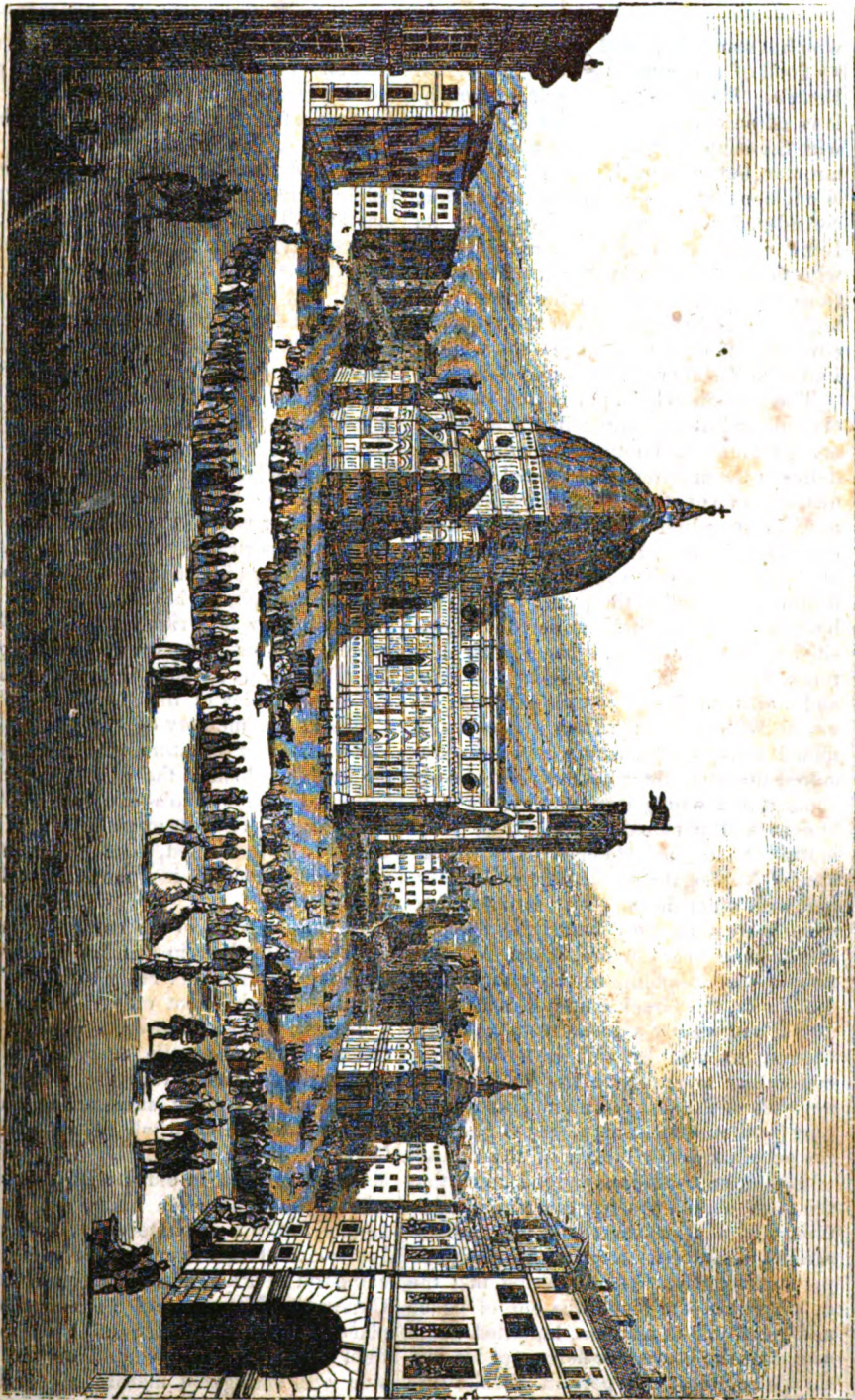
IN extent and magnificence the Duomo or cathedral of Florence is among the first ecclesiastical edifices of Europe. It also derives a great interest from its venerable antiquity, and from its being generally considered as the beginning of a new era in the history of architecture. Tuscan writers, who have been rather too lavish of their praise, have said a great deal about the bold abandonment of the Gothic style, and the happy adaptation of the ancient Roman style of architecture in this building, which shows an admixture of several styles, though it certainly has more of the ancient Roman than any work that prece-

ded it in the middle ages. Its fine double cupola was the first raised in Europe, and in other respects the Duomo of Florence served as a model to succeeding architecture. This cathedral was begun in 1296. The first architect employed upon it was Arnolfo di Lapo, a scholar of Cimabue the old painter. In one hundred and fifty-four years, and under successive artists, it was nearly finished. "But," says an old Florentine author, "the grand cupola was the parturition of the marvellous genius of Ser Filippo Brunellesco, an architect who in his days had no equal." It is related of Michael Angelo Buonarroti, that he used to gaze at this proud dome with rapture, and say it never could be surpassed by mortal man. He afterward surpassed it himself in his dome of St. Peter's, at Rome; but spite of his magnificent boast, the cupola of Florence was a prototype, and had more to do with St. Peter's than the dome of the Pantheon, which Buonarroti said he would suspend in the air. Brunellesco, the author of the cupola, gave the finishing hand to the cathedral. In size, materials, and boldness of conception, it is only inferior among Italian churches to St. Peter's. The walls are cased with black and white marble, and both without and within they are adorned with numerous statues, many of which are beautiful as works of art, or interesting as early specimens of Italian sculpture. As in the cathedral of Milan, where there is a complete army of statues, too many of them are placed in positions where they can scarcely be seen.

Like other old buildings, the cathedral of Florence has been subjected to the caprices of power and the bad taste of despotism. The façade was almost half incrustured with beautiful marble, and additionally adorned with many statues and bassi-relievi, executed from designs by the venerable Giotto, one of the fathers of painting—one of the immortal Italians who dug up the fine arts from the grave in which they had been buried for centuries. In 1586, without any visible motive, a grand-duke of the house of Medici demolished this antique front, and began another on a totally different design. This new façade was very slowly executed, and never finished; and in 1688 another grand-

duke, whose taste it did not please, knocked it all down, just as his predecessor had demolished the venerable works of Giotto. For several years the front of the church presented nothing but bare unsightly walls; and then, on the occasion of some ducal marriage, the reigning Medici had it shabbily painted in fresco, and in that condition it remained for upward of a century. The spirited republicans, the merchants and manufacturers of old Florence, with whose money the vast cathedral was originally built, could afford to lavish costly statues and the most precious marbles; but the population, enterprise, and wealth of the country had suffered a sad blight under the despotic government which succeeded the commonwealth, and the grand-dukes could only provide a little plaster and paint for a building which was the boast of the city, as it was the glory of the old republicans. The Medici—that family of merchant-princes whose virtues and abilities went out like lamps lacking oil, almost immediately after their assumption of absolute power—kept their marbles, their "porphyry, jasper, agate, and all hues" to heap upon their own inglorious tomb, in the church of San Lorenzo; and even that monument of their vanity and tawdry taste they never finished.

Seven great doors, three in front and two on either side, give admittance to the interior of the Florence cathedral. These doors are richly ornamented. Giovanni di Pisa and Ghirlandaió both employed their genius upon them. The floor of the church is paved with rich variegated marbles, disposed in a beautiful manner. Italian writers, who deserve our love by the fond, minute attention they have paid to such matters, record that the pavement of the great central aisle was laid down by Francesco di San Gallo; that round the choir by the versatile and great Michael Angelo; and the rest by Giuliano di Baccio d'Agnolo. The windows are smaller and fewer than usual, and the glass being painted with the deep rich tints common in ancient glass-staining, admits but a subdued light. As Forayth observes, "Here is just that 'dim religious light' which pleases poetical and devout minds." This light almost becomes "a darkness visible" in the choir, for the cupola or dome under



Florence Cathedral.

which it stands is closed at top, and admits no flood of sunshine like the dome of St. Peter's. The choir is in itself a blemish. It is of an octagonal form, to correspond with the shape of the cupola, which is not circular, but octagonal, or eight-sided. It is enclosed by a colonnade which is fine, considered apart and by itself, but its Ionic elevation is at variance, and jars with the rest of the building. Some curious bassi-relievi enrich the choir, and high overhead the interior of the cupola is covered with fresco paintings—the work of Federico Zuccheri and Giorgio Vasari.

The solemn old church is rich in associations and historical recollections. Here are the tombs of Giotto the painter, Brunellesco the architect, and Marsilius Ficinus, the reviver of the Platonic philosophy, and the friend and instructor of Lorenzo the Magnificent. Here, on the 26th day of April, 1478, when high mass was performing, and just as the priest held up the host, the blood of Giuliano de Medici was shed by the Pazzi; and his brother Lorenzo, clinging to the horns of the altar, and afterward flying into the sacristy, escaped with difficulty from those determined conspirators, who would have restored liberty to their country, but who set about it in a wrong way, and mostly from violent and personal motives, and who, moreover, leagued themselves with the king of Naples, the greatest tyrant in Italy, and with other despots who hated liberty even more than they hated the Medici. Here, some years before, when Constantinople was trembling at the approach of the Turks, the Greek emperor, half a fugitive, and wholly a mean suppliant and beggar, sat side by side with the pope, consenting to renounce the schisms and heresies of the Greek church; and engaging (without consulting them) to bring all his people into the bosom of the church of Rome, on conditions agreed upon, that the pope should procure him arms, treasures, and the assistance of the catholic princes of Europe. Here the German emperor, Frederick III., forgetting that the holy spirit of the place was one of peace and good-will to all men, knighted some scores of the bravest or fiercest of his cut-throat soldiery. A portrait recalls the memory of the greatest of all Florentines,

and shows the tardy repentance of his ungrateful countrymen. "An ancient picture by Orcagna, in which is painted the divine poet Dante, is placed here in consequence of an express decree of the Florentine republic; and this is the only public memorial we possess of that great master of Tuscan poetry." Such are the melancholy words of an old Florentine writer, who, like all his countrymen, deplored that the bard should have died in poverty and exile, and have left his strictly-guarded ashes in a foreign state. Next to this picture of Dante is the portrait of an English soldier of fortune—the renowned and infamous condottiero Sir John Hawkwood, who betrayed and sold the Pisans, in whose service he was, to their bitter enemies the Florentines.

In another part of the church there is a curious old portrait of Giotto. Brunellesco has the honor of a bust, as well as that of a Latin epitaph, on his tomb. This epitaph, which was written by Carlo Marzupini of Arezzo, "poet and secretary of the republic," is remarkable, as it includes the original idea of the inscription in St. Paul's to the memory of Sir Christopher Wren. The Florentine inscription tells the reader to look at the cupola to form a notion of Brunellesco's excellence in architecture. The inscription to Wren, which is better turned, says, "Reader! if you would behold his monument, look around you."

In various parts of the cathedral, there are statues by Baccio Bandanelli, Savino Rovezzano, and other early artists. The chapels which shoot off from the side aisles are rich in pictures, sculpture, and relics. The campanile or belfry, which is the square tower that the reader will see in our engraving, surmounted with a flag, is close to, but wholly detached from, the body of the cathedral. This was a common method in old Italian churches, where the bells were hung, not in the temple, but in a separate tower near to it. Instances of this occur at the celebrated cathedral of Pisa, at the church of Santa Chiara in Naples, and in many other places. The campanile of Florence is light and airy. It is coated on the outside with variegated marble, and studded here and there with statues. Giotto the

painter drew the designs on which it was erected. And here it is worthy of remark that nearly every one of these early artists was not a mere painter, or sculptor, or architect, but united in himself the knowledge and practice of all the three arts, besides being skilled in civil engineering, and, in most cases, a poet, or an accomplished musician, to boot. They were a wonderful set of men, who suddenly sprung up and flourished, and filled their native cities with beauty, in the midst of a most turbulent liberty, when wars and factions shook the peninsula from one end to the other, and every citizen or burgher of the free states of Tuscany and Lombardy was of necessity a soldier. The impulse they gave lasted some years after the decline of freedom; but Italy never saw such men in the tranquillity that arose out of confirmed despotism.

Opposite to the principal entrance of the cathedral there stands another detached building, which the reader will see in our view. This is the baptistery, which it was also usual not to include in the church, but to erect apart. At Pisa, as here, and in many other places, the baptistery is a separate edifice, rising near the cathedral. This baptistery was not confined to one parish: all the children born in the city and suburbs used to be christened in it; and as the population in the thirteenth, fourteenth, and fifteenth centuries, was immense, the baptismal fonts must have presented very busy scenes. A notion may be formed of the extent of the population from a fact mentioned by Machiavelli. He says that the bells of the campanile sounding the tocsin would, in a few hours, bring together one hundred and thirty-five thousand well-armed men, and all these from Florence alone with the adjoining valley of the Arno.

The baptistery is an octagonal building with a low dome supported by many granite columns. Its interior walls are lined and the pavement is inlaid with marble. The concave of the dome is covered with mosaic, the work of Andrea Tafi, one of Cimabue's pupils. But the glory and marvel of the baptistery lie in its three great bronze portals, which are wrought into bassi-relievi of exquisite beauty. The most ancient of the three was by Andrea

Pisano, and bears the date of 1330. The other two, which are still more excellent in style, and so beautiful, that Michael Angelo was accustomed to say they were worthy of being the gates of paradise, were the work of Lorenzo Ghiberti. The figures and groups of the reliefs refer to events in the life of St. John the Baptist. By the sides of the principal entrance there are two porphyry columns, given to the republic by the Pisans in 1117, in gratitude for important services rendered by the then friendly Florentines, who had kept watch and ward in Pisa while its warlike citizens went to the conquest of Majorca and Minorca. Close at hand, as also in some other parts of the city, are some very different memorials. They are links of a massy iron chain, with which, when entire, the Pisans used to shut up and defend their celebrated port. In 1362 the Florentines took the Porto Pisano, carried away the chain, and hung up fragments of it in their own city as trophies of victory.

The column surmounted by a cross which stands in front of the baptistery is said to have been erected as early as the year 408, in commemoration of a miracle performed on the spot by St. Zenobi, at that time bishop of Florence.

The procession seen crossing the piazza or square of the cathedral in our view is one that annually takes place on the day of Corpus Domini—the Fête Dieu of the French.

JANUARY.



CIVILIZED nations in general now agree to begin reckoning the new year from the first of January. Yet it may seem strange to call that a new season when everything is most inactive and lifeless—when animals are benumbed by the cold, and vegetables are all dead or withered. For this reason, some have thought it best to begin the year in spring, when the face of nature is

really renewed. But as this happens at different times in different years and climates, it has at length been determined to date the commencement of the year, as at present, within a few days after the winter solstice, or shortest day. This always takes place on the 21st of December; and from that time the days are gradually lengthened till the middle of summer: so that the year may properly be said to be now turned.

January, which now stands the first in the calendar, was so placed by Numa Pompilius, when he added it, together with February, to Romulus's year: its name is supposed to be derived from the Latin word *janua*, a gate; and as Janus was considered by the Romans to preside over the gates of heaven, the name of the month is supposed to have reference to the opening of a new era, or renewal of time. The Saxons denominated this month "*Wolf-monat*"; because people were always, in that month, more in danger of being devoured by wolves than in any season else of the year; for that, through the extremity of cold and snow, those ravenous creatures could not find other beasts sufficient to feed upon."

Nothing can be more wonderful than the effects of frost. To see the running stream stopped in its course—the lake, that was curled by every breeze, converted into a firm plain—the moist ground dried up, and made as hard as rock; and all this done by an invisible power, in the space of a single night, would be infinitely surprising to one unaccustomed to the sight.

Water, when frozen, is expanded: that is, takes up more room than before: hence, ice is lighter than water, and swims upon it. From this cause, if a bottle full of water hard-corked, be set to freeze, the bottle will be broken, for want of room for the expansion of the water. Water-pipes often burst from the same cause, and hoops fly off from barrels; nay, even a gun-barrel or a cannon, filled with water, and screwed up at the muzzle, has been burst in an intense frost.

The same property produces a very beneficial effect to the husbandman; for the hard clods of the ploughed fields are loosened and broken to pieces by the

swelling of the water within them when frozen. Hence the earth is crumbled, and prepared for receiving the seed in spring.

Snow is the water of clouds, frozen: on a close examination, it is found to be all composed of icy darts, or stars. Its whiteness is owing to the small particles into which it was divided. Ice, when pounded, becomes equally white. Snow is very useful, by covering the plants, and protecting them from the severity of the frost; for, at a certain depth under the snow, the cold always continues the same.

THE LIFE-BOAT.



HE heavy seas which break upon the rugged coasts of Northumberland and Durham render that part of Britain the frequent scene of the most disastrous shipwrecks. In the year 1789, the ship *Adventure*, of Newcastle, was stranded, on the south side of Tynemouth Haven, in the midst of tremendous breakers. The crew climbed up into the shrouds for safety, whence they dropped into the sea in the presence of thousands of spectators, not one of whom dared to venture out to their assistance in the common description of boats, although stimulated by the prospect of a high reward. The inhabitants of South Shields were so strongly affected by this melancholy occurrence that a public meeting was called, at which a committee was formed, and empowered to offer premiums for plans of a boat on a principle which should render it impossible to sink in the heaviest sea. Among many which were laid before the committee, that of Mr. Henry Greathead obtained the most general approbation; and, in pursuance of their orders, the first life-boat was constructed by him, and launched on the 30th of January, 1790. The value of this invention was soon fully proved, and its importance to the mercantile navy acknowledged. Mr. Greathead had made his models public, and therefore did not himself receive

Preparing to Launch the Life Boat.



those advantages which, in justice, he ought to have derived from his ingenuity. In 1802 he accordingly petitioned the house of commons, for the purpose of obtaining from the nation such reward as, in consideration of these circumstances, he might be thought to deserve. The petition was referred to a committee, which particularly directed its inquiries as to the utility of the life-boat, and the originality of the invention claimed by Mr. Greatheed. On the first point, several old seamen and persons employed in shipping were examined. One of the former stated that he had himself been in the life-boat, and had seen her go off scores of times, and never saw her fail in bringing away the crew from wrecks or vessels in distress. No other boat could have gone from the shore at the time the life-boat went. He also stated that, in the event of the life-boat filling with water, she would still continue upright, and not founder, as boats of the common construction did. He had seen her come ashore so full of water that it ran over each side. Another individual had been witness to the wreck of several ships at the same time. Out of one vessel the life-boat took fifteen men, who would otherwise inevitably have perished, as the ship went to pieces immediately after, and the wreck came on shore almost as soon as the boat. The crew of one of these vessels took to their own boat, which sunk, and all but two were lost. It was stated that, on one occasion, when the boat was full of water, the crew all went to one side, in order to try the possibility of upsetting her, which they were unable to accomplish. At the time when this committee was appointed, twelve years had elapsed since Mr. Greatheed's invention, during which period at least three hundred persons had been brought on shore from wrecks and ships in distress off Shields alone. It was fully established that no sea, however high, could upset or sink the life-boat. The originality of the invention being also clearly due to Mr. Greatheed, parliament voted him the sum of twelve hundred pounds sterling, "as a reward for his invention of the life-boat, whereby many lives have already been saved, and great security is afforded to seamen and proper-

ty in cases of shipwreck." The subscribers to Lloyd's presented Mr. Greatheed with one hundred guineas, and voted two thousand pounds for the purpose of encouraging the building of life-boats in different ports of the kingdom. Two years afterward, the emperor Alexander presented Mr. Greatheed with a valuable diamond ring.

Owing to the dangerous character of the Durham and Northumberland coast, and the quantity of shipping belonging to the northeastern ports, the life-boat is oftener launched here than from any other part of Great Britain; and, under the guidance of its crew, more frequently snatches the mariner from destruction.

The great characteristic of the life-boat is its buoyancy. It possesses this requisite quality in consequence of the bottom being hollow and perfectly air-tight; and the sides are also surrounded by several boxes, or compartments, which are also air-tight. We believe that boats are coming into use provided with a set of copper tubes. One upon this plan has lately been constructed at Sunderland. The division of the sides into several parts prevents the boat being endangered in case of its being struck by a cross wave. This, however, can seldom occur, because, both ends being formed alike, the direction of the boat can be changed without exposing it to the rude shocks to which it would be subjected by turning from one point to another in a tempestuous sea. It is also contrived that when the boat ascends the waves, any water which it may have shipped passes out at the lower end; and there are also holes at the bottom, through which whatever remains is immediately discharged. The Sunderland boat was built in the year 1800, ten years after Mr. Greatheed's invention had become known. It is twenty-six feet in length, and the width is nine and a half feet. This boat, on one occasion, would have been knocked to pieces by a cross sea but for the division of the sides into various parts. In the bottom are six air-holes, which are so proportioned to the size and gravity of the vessel that, when full of water, it is discharged in forty seconds. She is managed by six or ten men, as the urgency of the case may require, two of whom steer



The Life Boat in a Storm.

with seventeen-feet oars. The oars are secured in their places by a coiled rope. The boat is preserved in repair, and its crew paid, by a small impost on ships entering the harbor. When out of service, it is kept under a substantial shed near the beach, mounted upon a four-wheeled carriage. As soon as the thrilling cry "A wreck!" is heard, the lieutenant of the boat assembles his men; and, after a survey of the ill-fated ship, each proceeds to his place in the boat. When all their arrangements are completed, two or more horses are harnessed to the carriage, and the boat is drawn to the water's edge. By a mechanical contrivance, the frame of the carriage is then brought into a sloping position, and the boat is launched amid the breakers, to pursue its benevolent enterprise.

The men who compose the crew of a life-boat often acquire a sort of moral dignity, occasioned by the exercise of the manly virtues which a faithful discharge of their duties demands, and the sympathetic feelings to which they are habituated by the nature of their vocation. A fine fellow at Tynemouth said to the artist who made the sketches which accompany this description, patting the sides of his boat as if it were a favorite animal, "Have you made a picture of my boat, sir?—She's a good one, and has been with me at the saving of twenty-seven lives in one morning."

The boats, in general, of this description, are painted white on the outside, this color more immediately engaging the eye of the spectator when rising from the hollow of the sea. The person who steers her should be well acquainted with the course of the tides, in order to take every possible advantage: the best method, if the direction will admit of it, is to head the sea. The steersman should keep his eye fixed upon the wave, or breaker, and encourage the rowers to give way as the boat rises to it; being then aided by the force of the oars, she launches over it with vast rapidity, without shipping any water. It is necessary to observe that there is often a strong reflux of the sea occasioned by the stranded wrecks, which requires both despatch and care in the people employed, that the boat be not damaged.

When the wreck is reached, if the wind blows to the land, the boat will come in-shore without any other effort than steering.

In case of a ship being stranded on a part of the coast where the services of the life-boat are inaccessible, it has been recommended to fasten a boom to the boat's bow, by which means the violence of the waves are broken. In a treatise on "Practical Seamanship," by Mr. Hutchinson, an instance is mentioned of the preservation of ten men in a small boat only twelve feet long, by means of a log of wood tied to the boat's bow, which kept her end on to the waves, and preserved her from filling with water.

Life-boats of somewhat similar construction are found in most harbors of our own seaboard, and attached to most of our larger vessels and packet-ships.

AUTOGRAPHY.



HE first thing one does on receiving a letter, is to look whether we recognise the writing as that of a hand familiar to us. "Oh, this is from A," or "This is from B," is a familiar exclamation.

At one glance we recognise A or B, as distinctly as if either stood before us face to face, though both perhaps may be thousands of miles off. Then, again, we collect the various signatures of our friends, or of celebrated persons whom we may never have seen, or known only by their works or fame, and paste them into our albums, and take a delight in looking on them, and comparing their resemblances or differences; in short, every observation of the kind leads us to the conclusion that almost every person's handwriting differs from another, and that there is almost as complete an individuality in their mode of writing as in their countenances, their gait and gestures, or as in their minds.

There is scarcely a collector of such signatures who is not also a diviner of the

character of the person as deduced from his handwriting. How often do we hear it observed, "This is the writing of a prim, methodical, cold, reserved mortal;"—or, "That is the signature of a gay, volatile, and careless being." How unequivocally can we mark out the writing of a lady from that of a gentleman. How readily that of a lawyer or merchant from that of a fashionable idler, or a "man of wit or pleasure about town." To many, it might appear a very absurd thing to say that there exists an intimate relation between the color of a man's hair and his handwriting, and yet it is well known that the initiated in this matter pretend infallibly to distinguish the writing of a fair-haired person from that of a dark.

A very ingenious writer has afforded a physiological reason for the diversities of handwriting. This diversity he attributes to temperament; that is, a certain condition of the physical and mental constitution of the individual which constitutes his peculiar character. Of these temperaments there are at least half a dozen kinds, pretty distinct and well marked, and perhaps half a dozen more of blended or mixed temperaments, where the shades are less distinguishable. The two extremes of natural temperament or complexion are well known to every one. We shall take, for instance, a man with light auburn hair, blue sparkling eyes, a ruddy complexion, ample chest, and muscular, well-rounded, and agile frame. Such a man will rarely fail to have a smile on his countenance, or a cheerful, perhaps witty saying on his lips. You will never find him moping in a solitary corner, but flitting about in the sunshine and bustle of society, joining in everything, and dwelling on nothing long. When such a man sits down to write, he makes short work of it: he snatches the first pen that comes in the way—never looks how it is pointed—dabs it into the ink, and then dashes on from side to side of the paper in a full, free, and slip-slop style, his ideas—or at all events his words—flowing faster than his agile fingers and leaping muscles can give them a form. Such a one's handwriting can never be mistaken; it is like his own motions, hop-step-and-jump. But, on the contrary, select a man with deep black hair, black

eyes, brown or sallow complexion, and thin spare form, you will generally find him alone, and silently meditating, or sitting solitary amid crowds—of few words, of slow and deliberate action. You need scarcely be told how such a man sets about writing. After weighing well his subject in his mind, he sits down deliberately, selects and mends his pen, adjusts his paper, and in close, stiff, and upright characters traces with a snail's pace his well-weighed and sententious composition. There can be no mistake in tracing the two writings which we have just described; and an adept in the science can not fail in astonishing his audience with a sketch of the leading peculiarities of the mind and manners of each. But there are many intermediate shades of temperament, and many circumstances which go to modify the natural tendencies of the mode of writing, which fall to be considered. We shall, in the first place, give the following classified table of temperaments:—

1. Vigorous, light-haired, excitable temperament, what is commonly called the sanguine. The handwriting large, flowing, open, and irregular.
2. Dark-haired, excitable temperament, with brown florid complexion. The writing small, equal, and rather free and easy, with a firm and full stroke.
3. Light-haired, little excitable temperament; the complexion brown or sallow; the form spare. The writing less free and more methodical than No. 1, but less vigorous and less decided than No. 2.
4. Dark-haired, slowly excitable temperament; dark complexion, spare form, and melancholic habit. Small, cramp, upright writing, without ease or freedom—evidently slowly penned.
5. Feeble, light-haired, little excitable temperament; character timid and nervous. The writing small, unequal, and feebly traced, or not written with decision.
6. Mixed temperament, combining two or more of the above.

There are various combinations of these, which it would be unnecessary to particularize. Education and particular training of course make great changes on the natural tendency of the handwriting: thus men of business acquire a mechanical style

of writing, which obliterates all natural characteristics, unless in instances where the character is so strongly individual as not to be modified into the general mass. The female hand is also peculiar. Generally it is more feeble and less individual than that of the male. In the present day, all females seem to be taught after one model. In a great proportion, the handwriting is moulded on this particular model: those only who have strong and decided character retain a decided handwriting. We often find that the style of handwriting is hereditary: sons frequently write very like their fathers; and this they do independent of all studied imitation, because the temperament happens to be hereditary also. A delicate state of health, especially if it has occurred in boyhood, has a considerable effect in modifying the natural form of the handwriting; thus sometimes connecting the free and flowing hand of the sanguine temperament into a more staid and methodical one.

A deficiency of early culture must also have a considerable influence on the form of writing. The forms, too, have varied in different historical eras. Before the introduction of printing, more pains seem to have been bestowed on penmanship. Ancient manuscripts are often found written in a beautiful, upright, and well-formed character, more in the style of print than the modern careless and flowing lines. This is easily to be accounted for: almost all that is worth preserving is now committed to that mighty engine of intelligence, both to present and future ages, the press, and therefore less care is bestowed on the original manuscript. The compositor and the pressman have now taken the place of the ancient scribe and copyist.

But even the individual handwriting varies from its character at various periods of life. In youth it is raw and unformed; in manhood it assumes its full character; and in old age it suffers somewhat of decay. Circumstances also affect its form not inconsiderably. No man is likely to dash off a note on his marriage-day in the same style that he would set about writing out his last will and testament. Our moments of joy are impressed upon the symbolical representations of them, just as are our hours of bitterest sorrow. We of-

ten approach our familiars in a scrawl, as if imprinted by birds'-claws instead of quill feathers, and which we would not deliberately despatch to those that we are accustomed to look up to with respect or awe.

Ease and freedom, and an indifference to please, are the prerogatives of rank and fashion; and hence it is probable that the most wretched scrawls have become fashionable among those who ever strive to ape the manners of the great. There are also, no doubt, national peculiarities in handwriting as well as individual. The Frenchman will show a volatility and spirit in his writing very different from the sedate and thoughtful German. The northern Russ or the Calmuk Tartar must have a different fist altogether from that of the soft and voluptuous native of Hindostan.

We throw out these few hints to collectors of autographs. Let them arrange and classify their specimens, and form of them a *catalogue raisonnée*. Thus, in the end, may some philosopher among their number elevate the pursuit into a science, at least not inferior to the ancient ones of palmistry, astrology, and divination, or to the modern ones of mesmerism, hypnotism, homeopathy, or hydropathy.

THE ORANGE-TREE.



THE citron family of plants comprehends four distinct species—the citron, the lemon, the orange, and the shaddock; and the orange and lemon have many varieties. Even in the

East, where they are native, they are not a little capricious in their growth, the fruit and even the leaves frequently altering, so that it is not easy to say which is a distinct species and which a variety. They continue flowering during nearly all the summer, and the fruit takes two years to come to maturity; so that for a considerable period of each year, a healthy tree ex-

hibits every stage of the production, from the flower-bud to the ripe fruit, in perfection at the same time. They are all either small trees or shrubs, with brown stems, green twigs and leaves, bearing some resemblance to those of the laurel. We can not, however, judge of the size of the orange-tree from the specimens ordinarily seen in England and other northern countries. In parts of Spain there are some old orange-trees forming large timber; in the convent of St. Sabina, at Rome, there is an orange-tree thirty-one feet high, which is said to be six hundred years old; and at Nice, in 1789, there was an orange-tree which generally bore five thousand or six thousand oranges, and was fifty feet high, with a trunk requiring two men to embrace it. The size depends much upon the age of the plant.

All the citron family are natives of the warmer parts of Asia, though they have been long introduced into the West Indies, the tropical parts of America, the Atlantic isles, the warmer countries of Europe, and even Britain. The orange is a taller and more beautiful tree than either the citron or the lemon; but, like them, has prickly branches in its native country. It was originally brought from India. Whether it was originally a Chinese fruit seems doubtful, as it is not mentioned by Marco Polo, who is so circumstantial in describing all the productions of that empire. Yet the Portuguese found it there, and one of the missionaries relates that the tree was still standing at Canton, from which the seed was taken by the missionaries and sent to Portugal. The first distinct mention of the orange is by the Arabs. It is noticed by Avicenna; and Galessio (in whose "*Traité du Citrus*," published at Paris in 1811, the history of this fruit was first carefully traced) states that, when the Arabs penetrated to India, they found the orange tribe there further in the interior than Alexander had advanced. They brought them thence by two routes: the sweet ones, now called China oranges, through Persia to Syria, and thence to the shores of Italy and the south of France; and the bitter oranges, commonly called Seville oranges, by Arabia, Egypt, and the north of Africa, to Spain. At the time that the people of

Europe first visited the Levant in great numbers—that is, during the crusades for the delivery of Syria from the dominion of the Saracens—oranges were found to be abundant in that country. Though they were in reality cultivated trees, their number, and the beauty and excellence of their fruit, naturally caused the adventurers (who were not very conversant with natural history, and not a little prone to romance and credulity) to believe and state that these were indigenous to the country, and formed a portion of the glories of the "Holy Land." The fables of the profane writers, and the ambiguity of the description of vegetables in holy writ, helped further to confirm this opinion. As the oranges were of the form of apples, and the color of gold, it did not require much stretch of the imagination to make them the golden apples of the garden of the Hesperides.

There is certainly no evidence to show that the orange was known to the ancients either in Europe or Syria; but there is much to demonstrate that we are indebted for the first knowledge of it to the Arabs, who, with their zeal to propagate the religion of the Koran, were also anxious to extend the advantages of agriculture and medicine. The sweet orange which they introduced was not, strictly speaking, that which has since been called the China orange, and which under that name has been introduced into Spain and Portugal, as well as St. Michael's, and other Atlantic isles, and the West Indies; but rather the orange which was known in Italy before Vasco de Gama doubled the cape of Good Hope: when the Portuguese reached India, they found the orange there, and also in China, which was visited for the first time by sea in the early part of the sixteenth century. Although the oranges of St. Michael's in the Azores are now the best that are to met with in the European market, they are not indigenous productions of that island; but were sent there by the Portuguese, as the same fruit was originally sent to the American continent by the Spaniards. In the middle of a forest, on the banks of the Rio Cedeno, Humboldt found wild orange-trees laden with large and sweet fruit. They were probably the remains of some old

Indian plantations : for the orange can not be reckoned among the spontaneous productions of the New World.

Many varieties of the orange family are now cultivated in Portugal, Spain, France, Italy, and Greece. In the first two countries they especially abound—in Algarve, and in the fine plains of Andalusia, on the banks of the Guadalquivir. The latter is the place from which the bitter or Seville oranges are chiefly obtained. In Algarve and Andalusia the orange-trees are of great size. Extensive orchards of them have formed the principal revenue of the monks for several centuries ; and in the latter province, the craggy mountains of which are covered with gardens, and vineyards, and forests abounding in fruit, the flowers of the orange fill the air with their perfume, and lead the imagination back to those days which the Moorish historians and poets delight in describing, when the land which they conquered was adorned with all the refinements of their taste and intelligence, and the luxuries of the East were naturalized in the most delicious regions of the West. In Cordova, the seat of Moorish grandeur and luxury, there are orange-trees still remaining, which are considered to be six hundred or seven hundred years old ; the trunks of these old trees have begun to decay, and when they are diseased they are covered with a kind of lichen which is supposed to be peculiar to the orange.

The precise time at which the orange was introduced into England is not known with certainty, but probably it may have taken place not long after its introduction into Portugal, which was in the early part of the sixteenth century. The first oranges, it has been stated, were imported into England by Sir Walter Raleigh ; and it is said that Sir Francis Carew, who married the niece of Sir Walter, planted their seeds, and they produced the orange-trees at Beddington, in Surrey, of which Bishop Gibson, in his additions to Camden's "*Britannia*," speaks of as having been there a hundred years previous to 1695. As these trees always produced fruit, they could not have been raised from seeds ; but they may have been brought from Portugal, or from Italy, as early as the close of the sixteenth century. The

trees at Beddington were planted in the open ground, with a moveable cover to screen them from the inclemency of the winter-months. In the beginning of the eighteenth century they had attained the height of eighteen feet, and the stems were about nine inches in diameter ; while the spread of the largest of the number was twelve feet one way and nine the other. There had always been a wall on the north side of them, to screen them from the cold in that quarter ; but they were at such a distance from the wall as to have room to spread, with plenty of air and light. In 1738 they were surrounded by a permanent enclosure, like a greenhouse. They were all destroyed by the great frost of the following winter ; but whether this was wholly owing to the frost, or partly to the confinement and damp of the permanent enclosure, can not now be ascertained. At Hampton Court there are many orange-trees, some of which are said to be three hundred years old. They are generally moved into the open air about the middle of June, when the perfume of their blossoms is most delicious. Orange and lemon trees have been cultivated in the open air in England. For a hundred years, in a few gardens of the south of Devonshire, they have been trained as peach-trees are against walls, and sheltered only with mats of straw during the winter.

The orange, naturally produced in warmer climates than our own, has been rendered our property by commerce in a very remarkable degree. It is common in Florida and other parts of the south, and may be procured at little more cost than the commonest of our domestic fruits in the more northern states ; while it is perhaps the most refreshing and healthy of all the fruits of warm countries. It has thus become a peculiar blessing to us ; for while it offers a gratification within the reach of the poorest, it is so superior to other fruits, that it can not be despised for its cheapness, even by the richest. The duty upon oranges imported into Great Britain in the year 1834 amounted to sixty-eight thousand pounds sterling, at the rate of two shillings sixpence for a package not exceeding five thousand cubic inches. Assuming the cubical contents of an orange as ten inches, there were five



Seville Orange-Tree.

hundred in each package ; and thus we see that two hundred and seventy-two millions of this fruit were annually imported, allowing about a dozen oranges a year to every individual of the population.

HISTORY.



It may be asked how are we to judge of the general consequences of principles unlimited in their operation ? The brief span of human existence will permit us to make but few, very few, observations upon

the course of human affairs, ere the curtain falls, and the scene of life is ended.

But are we then left like the benighted, tempest-tost mariner, with the deep, unfathomable gulf of oblivion behind, and the dark, portentous clouds of doubt and uncertainty brooding over the future ? without chart to designate our relative situation with respect to those nations which in times gone by have risen, flourished, and fallen—to point to the rocky shoals upon which so many noble ships of state have been wrecked ?—nor to the awful whirlpool of luxury and effeminacy, of mental, moral, and physical degeneracy and degradation within whose chaotic vortex nation after nation has been engulfed and sunk to rise no more ? Have we neither compass nor pole-star, by which our course may be directed to the fair haven of peace and prosperity ? Yes, thank Heaven ! we are presented with the most inestimable treasury of human experience ; the storehouse of wisdom is at hand, and he who will may open the golden portals, enter the sanctuary of knowledge, and become the recipient of those joys inseparable from the benign influence of that mental illumination which shall insure moral rectitude. Upon the *historic* page, with a retrospective glance, we may behold generation following generation in rapid succession upon the theatre of life. Here, to the philosophic mind which reasons of causes from their consequences, is pre-

sented a truth of mighty import : which is, that to a want of research and investigation is to be attributed the degeneracy of those holy impulses of reverence and adoration toward the sovereign Arbiter of the universe, which constitute the basis of present felicity and of future hope. Thus have designing hypocrites, in the cupidity of their hearts, been enabled to shackle the unsuspecting, unreflecting mind, and rear upon the dark foundations of ignorance the deformed superstructure of credulous superstition, and institute those rites the observance of which would better comport with the ferocious disposition of the tiger, that, delighting in blood, bathes his fangs in the gore of defenceless flocks and herds, than that love of benevolence and mercy which should characterize man. Who can without emotion reflect upon the horrid scene of thousands and tens of thousands sacrificing themselves before the car of Juggernaut ?—multitudes perishing in the waves of the Ganges ?—the Indian widow writhing in the agonies of death, upon the flaming fagots of her husband's funeral-pile ?—or the hosts of beautiful youth, who, like summer flowers withered and laid low by the blasts of livid lightning, have been offered as victims upon Moloch's blood-stained altars ? Yet these are to be imputed to the blind submission of men to the dictation of leaders, whose declarations, however devoid of reason, are adopted as oracular truths, to question which is little less than heresy, and in support of which are enlisted all those inveterate prejudices and every impulse of bigotry of which the uninstructed mind is susceptible.

To the same cause are also to be referred the fanatical proceedings of the followers of the hermit Peter, who, in their crusades, not only spread dismay and death through the land of Palestine, but literally whitened the country over which they passed in their way thither with the bleaching bones of the wretched votaries of that wild delusion.

Though the increased knowledge of later days has tended to destroy the power of fanaticism over the minds of men where intelligence abounds, still the same elements are at work wherever ignorance is found.



Portrait of Benjamin Franklin.

CHARACTER OF FRANKLIN.



FEW men ever possessed such opportunities or talents for contributing to the welfare of mankind; fewer still have used them to better purpose: and it is pleasant to know, on his own authority, that such extensive services were rendered without any sacrifice of his happiness. In his later correspondence he frequently alludes with complacency to a favorite sentiment which he has also introduced into his "Memoirs"—that "he would willingly live over again the same course of life, even though not allowed the privilege of an author, to correct in a second edition the faults of the first."

His remarkable success in life and in the discharge of his public functions is not to be ascribed to genius, unless the term

be extended to that perfection of common sense and intimate knowledge of mankind which almost entitled his sagacity to the name of prescience, and made "Franklin's forebodings" proverbially ominous among those who knew him. His pre-eminence appears to have resulted from the habitual cultivation of a mind originally shrewd and observant, and gifted with singular powers of energy and self-control. There was a business-like alacrity about him, with a discretion and integrity which conciliated the respect even of his warmest political foes; a manly straight-forwardness before which no pretension could stand unrebuked; and a cool tenacity of temper and purpose which never forsook him under the most discouraging circumstances, and was no doubt exceedingly provoking to his opponents. Indeed, his sturdiness, however useful to his country in time of need, was perhaps carried rather to excess; his enemies called it obstinacy, and accused him of being morose and sullen. No better refutation of such a charge can be wished for than the testimony borne to his

disposition by Priestley, a man whom Franklin was justly proud to call his friend. In private life he was most estimable; two of his most favorite maxims were, never to exalt himself by lowering others, and in society to enjoy and contribute to all innocent amusements without reserve: his friendships were consequently lasting, and chosen at will from among the most amiable as well as the most distinguished of both sexes, wherever his residence happened to be fixed.

His chief claims to philosophical distinction are his experiments and discoveries in electricity; but he has left essays upon various other matters of interest and practical utility—an end of which he never lost sight. Among these are remarks on ship-building and lighthouses; on the temperature of the sea at different latitudes and depths, and the phenomena of what is called the Gulf-stream of the Atlantic; on the effect of oil poured upon rough water, and other subjects connected with practical navigation; and on the proper construction of lamps, chimneys, and stoves. His suggestions on these subjects are very valuable. His other writings are numerous: they relate chiefly to politics, or the inculcation of the rules of prudence and morality. Many of them are light and even playful; they are all instructive, and written in an excellent and simple style; but they are not entirely free from the imputation of trifling upon serious subjects. The most valuable of them is probably his autobiography, which is unfortunately but a fragment.

As a speaker, he was neither copious nor eloquent; there was even a degree of hesitation and embarrassment in his delivery. Yet, as he seldom rose without having something important to say, and always spoke to the purpose, he commanded the attention of his hearers, and generally succeeded in his object.

His religious principles, when disengaged from the skepticism of his youth, appear to have been sincere, and unusually free from sectarian animosity.

Upon the whole, his long and useful life forms an instructive example of the force which arises from the harmonious combination of strong faculties and feelings when so controlled by sense and prin-

ciple that no one is suffered to predominate to the disparagement of the rest.

PRIDE, OFFENSIVE AND DEFENSIVE.



THE French have two words to express pride — *la fierté*, and *l'orgueil*. A lady being asked to define the difference, replied very promptly and happily that the first was "defensive" and the second "offensive pride." The distinction is important. Of the first, it is impossible to have too much; of the second, it is equally impossible to have too little. Defensive pride is that proper self-respect which will not allow its possessor to commit an unworthy, a base, or a mean action. It is that which urges us to distinguish ourselves above the crowd of the idle, the ignorant, the dilatory, and the variable, by our industry, our wisdom, our perseverance, and our constancy; and which prompts us to win the applause of our fellows by our goodness, and consequent greatness. Defensive pride is the shield with which we keep off the assaults of those who, openly or insidiously, would bring us down to a lower moral level than our judgment and our conscience inform us we ought to hold: it is the amulet with which we preserve ourselves from the machinations of evil, and the perfume by aid of which we may walk amid the haunts of vice without contamination. Without a due proportion of pride like this, in some one of its various developments, no man yet has ever arrived at distinction, or left behind him a name which the world holds in honor. It is the nurse of emulation and ambition, and becomes, when properly or opportunely excited, the spur to urge the timid or the sluggish to do the good which another has left undone—the steel upon some flinty nature, eliciting heat and light which might otherwise have remained latent for ever. Pride of this kind sits as well upon the humblest as upon the loftiest. It is the pride of a man independent of his rank, his wealth, or his station; the

pride of the gold, and not of the stamp upon it. Pride of this kind has found its most poetical and at the same time its best and truest utterance in the song of Robert Burns, "A man's a man for a' that." Every one who feels his heart glow at the sentiments expressed in that glorious lyric, feels defensive pride; and if he continues to feel it, and makes it the guide of his life, he becomes—though he toil all day, and far into the night, for hard and scanty bread; though he "wear hodden gray," and dwell in a hut scarcely sheltered from the winds and rains of heaven—an ornament to his kind, and a blessing to himself.

Offensive pride, on the other hand, shows the little mind, as defensive pride exhibits the great one. It is the pride of externals, as defensive pride is that of internals; the pride of the adventitious circumstances in which a man is placed, and not of the qualities of the man himself. Offensive pride assumes various forms, and is in all of them equally a proof of ignorance, presumption, and heartlessness. To the man of sense, it is always ridiculous; and wherever it does not excite the anger, it is sure to excite the contempt of the well-minded. When we see a man proud of his high lineage, and expecting that we shall do homage to him for the virtues of his ancestors, although he have none of his own, we despise him all the more for the highness of his name; his pride and his lordly airs gall us, if we are of stern nature; and provoke us to laughter, if we are of the number of those who can find amusement in the contemplation of human folly: proud men of this class have been happily compared to turnips and potatoes—all the best part of them is under ground.

Equally, if not more offensive, is the pride of wealth. This pride is the parent of every meanness. We may be quite sure, when we see a man proud of his money, that he has gained it in a dirty manner, and that he makes really, though not perhaps visibly to all men's eyes, a dirty use of it. If he have a large house, it is not for use, but for ostentation. If he have fine carriages, valuable horses, and footmen in gay liveries, it is that he may excite more attention from the frivolous and unthinking, than some one else who

has hitherto rivalled him. If he give splendid entertainments, it is that he may make the earls or the barons who condescend, or the poor dependents who fawn and cringe, to appear at them, envious of the wealth which their own can never equal. If he give charity, it is that it may be blazoned abroad; for he will refuse a dollar to a deserving object if the donation is to remain secret, when he would give a hundred to a less deserving one if the fact could be trumpeted in the newspapers. Such a man pays for the publication of his charitable deeds; and not only does not hide from his left hand, what his right hand does, but sees the common crier of the streets to promulgate it with embellishments. Such a man is not proud of being charitable, but of being thought so—not thankful for wealth, because it enables him to do good, but proud of it because it gives him the means of attracting more worldly attention than better men, and enables him to ride and drink wine when superior merit walks and can only afford small beer.

There is also a pride of beauty, a pride of strength, a pride of skill, and a pride of talent, which all become offensive if they are loudly expressed, and are unsupported by other qualities which it is the province of a defensive pride to foster in the mind. When a woman is proud of her beauty, and has neither wit, nor sense, nor good nature, nor any charm of mind that will endure when beauty fades, her pride is offensive. When a man vaunts his skill in any particular pursuit—a skill which may be undoubted—and thrusts it inopportunistically and pertinaciously forward, his pride is offensive: and when a man who has gained some credit for talent is always fearful that he will lose it, unless he daily and hourly impresses the recollection of it upon those with whom he may be brought in contact, his pride is offensive, and is that of a little talent only, and not of a great one. Combined, on the contrary, with defensive, and not with offensive pride, beauty, strength, skill, and talent, become enhanced in our eyes. Beauty then knows and acts upon the knowledge that goodness will lend her additional charms; physical strength learns not to be proud merely of that which it has in

common with the brutes, but to be strong in mind; and skill and talent, conscious that self-praise is no recommendation to the world, resolve to win the world's applause by future good deeds, and not by boasting vaingloriously of the deeds that are past.

There is another great difference between defensive and offensive pride—which is, that while the one invariably keeps its thoughts to itself, the other as invariably shouts them into all men's ears. Defensive pride never makes a boast; but offensive pride is never easy but when the boast is on its tongue. The one is silent, the other is loquacious. Defensive pride is retiring; offensive pride is forward; and the one lives upon the rewards of conscience, while the other only exists upon the babble of the crowd.

There are other kinds of pride which are as offensive as those already mentioned. We would cite, especially, "sensitive pride," and the "pride that apes humility." Sensitive pride is founded, not upon a proper self-respect, but upon inordinate vanity, linked with some degree of cowardice. If it has taken root in the breast of a poor man, or one of inferior station in society, it leads him to imagine insults from the rich and the lofty which are not intended, and to suppose that all the world are thinking how they can show him disrespect, when, in fact, the world is not giving itself the slightest concern about him. But this truth never enters into his mind; for if it did, he would be still more miserable. His consolation is, that the world hates him, and tries to trample him down, and he flies to that rather than to the thought—annihilating to his vanity and self-conceit—that the world most likely does not even know of his existence. In a rich or powerful man, this pride generally springs from some defect, physical or moral, but most often from the former, as in the case of Lord Byron and his lameness. Upon this point his pride was ridiculously sensitive and offensive, and laid bare the weaknesses of his mental constitution—a vanity pained to be conscious of a physical deformity, which rendered him less perfect than the most perfect of his fellow-creatures, and a cowardice that prevented him from rising superior

to the possible sneers of the thoughtless or unfeeling.

Of the "pride that apes humility," it may be truly said that it is, of all kinds of pride, the most offensive. In addition to the bad qualities inherent in a false and unfounded estimate of self, it possesses that of hypocrisy, and no junction can be more odious than that of hypocrisy and pride. Foolish pride may offend, but hypocritical pride offends and disgusts us. The pride of wealth, of rank, of power, of beauty, or of talent, though they may be unjustifiable, at least lean upon something that exists or is supposed to exist; but the pride that apes humility leans upon a lie, which it knows to be a lie. It unites the bad qualities of every other kind of pride, and is, in a manner, the concentrated essence of offensiveness.

THE WILD TURKEY.



THE native country of the wild turkey extends from the north-western territory of the United States to the isthmus of Panama; south of which it is not to be found. In Canada, and the now densely-peopled parts of the United States, this bird was formerly very abundant; but the progress and aggressions of man have compelled them to seek refuge in the remote interior. It is not probable that the range of the wild turkey extends to or beyond the Rocky mountains. The Mandan Indians, who a few years ago visited the city of Washington, considered it one of the greatest curiosities they had seen, and prepared a skin of one to carry home for exhibition.

It is not necessary to be particular in describing the appearance of a bird so well known in its tame state. The difference consists chiefly in the superior size and beauty of plumage in the wild turkey; for, under the care of man, this bird has greatly degenerated, not only in Europe and Asia, but in its native country. When full



Wild Turkey.

grown, the male wild turkey is nearly four feet in length, and nearly five in extent (from wing to wing), and presents in its plumage a rich assortment of colors, brown predominating, which might be vainly sought in the domesticated bird. Altogether his appearance is such as, with other considerations, disposed Dr. Franklin to regret that he, rather than the bald eagle, had not been selected as the national emblem of the United States.

The wild turkeys do not confine themselves to any particular food: they eat maize, all sorts of berries, fruits, grasses, beetles; and even tadpoles, young frogs, and lizards, are occasionally found in their crops; but where the pecun-nut is plenty, they prefer that fruit to any other nourishment. Their more general predilection, however, is for the acorn, on which they rapidly fatten. When an unusually profuse crop of acorns is produced in a particular section of country, great numbers of turkeys are enticed from their ordinary haunts in the surrounding districts. About the beginning of October, while the mast still remains on the trees, they assemble in flocks and direct their course to the rich bottom lands. At this season they are observed in great numbers on the Ohio and Mississippi.

The males, usually termed *gobblers*, associate in parties numbering from ten to one hundred, and seek their food apart from the females; while the latter either move about singly with their young, then nearly half grown, or—in company with other females and their families—form troops, sometimes consisting of seventy or eighty. They are all intent on avoiding the old males, who, whenever opportunity offers, attack and destroy the young by repeated blows on the scull. All parties, however, travel in the same direction, and on foot, unless they are compelled to seek their individual safety by flying from the dog of the hunter, or their progress is impeded by a large river. When about to cross a river, they select the highest eminences, that their flight may be the more certain; and here they sometimes remain for a day or more, as if for the purpose of consultation, or to be duly prepared for so hazardous a voyage. During this time the males gobble obstreperously, and strut

with extraordinary importance, as if they would animate their companions and inspire them with hardihood. The females and young also assume much of the pompous air of the males, the former spreading their tails and moving silently around. At length the assembled multitude mount to the tops of the highest trees, whence, at a signal-note from a leader, the whole together wing their way toward the opposite shore. Immediately after these birds have succeeded in crossing a river, they for some time ramble about without any apparent unanimity of purpose, and a great many are destroyed by the hunters, though they are then least valuable.

When the turkeys have arrived in their land of abundance, they disperse in small flocks, composed of individuals of all ages and sexes intermingled, who devour all the mast as they advance: this occurs about the middle of November. It has been observed that, after these long journeys, the turkeys become so familiar as to venture on the plantations, and even approach so near the farmhouses as to enter the stables and corn-cribs in search of food. In this way they pass the autumn and part of the winter. During this season great numbers are killed by the inhabitants, who preserve them in a frozen state, in order to transport them to a distant market.

Early in March they begin to pair. The sexes roost apart, but at no great distance, so that when the female utters a call, every male within hearing responds, rolling note for note, in the most rapid succession; not as when spreading the tail and strutting near the hen, but in a voice resembling that of the tame turkey when he hears any unusual or frequently-repeated noise. Where the turkeys are numerous, the woods—from one end to the other, sometimes for hundreds of miles—resound with this remarkable noise, uttered responsively from their roosting-places: this is continued for about an hour; and, on the rising of the sun, they silently descend from their perches, and the males begin to strut, as if to win the admiration of their mates. Their process of approach to the females is remarkably pompous and ceremonious; and, in its course, the males often encounter one another, and desperate battles ensue, when the conflict is only

terminated by the flight or death of the vanquished. With the hen whose favor is thus obtained the male is mated for the season, though he does not hesitate to bestow his attentions on several females whenever an opportunity offers. One or more females, thus associated, follow their favorite and rest in his immediate neighborhood, if not on the same tree, until they begin to lay, when they shun their mates, in order to save their eggs, which the male uniformly breaks if in his power. At this period the sexes separate, and the males, being much emaciated, retire and conceal themselves by prostrate trees, in secluded parts of a forest, or in the almost impenetrable privacy of a canebrake. By thus retiring, using very little exercise, and feeding on peculiar grasses, they recover their flesh and strength, and when this object is attained again congregate and recommence their rambles.

About the middle of April, when the weather is dry, the female selects a proper place in which to deposite her eggs, secured from the encroachment of water, and as far as possible concealed from the watchful eye of the crow. The nest is placed on the ground, either on a dry ridge, in the fallen top of a dead leafy tree, under a thicket of sumach and briers, or by the side of a log: it is of a very simple structure, being composed of a few dry leaves. In this receptacle the eggs are deposited, sometimes to the number of twenty, but more usually from nine to fifteen; they are like those of the domestic bird.

The female uses great caution in the concealment of her nest: she seldom approaches it twice by the same route; and on leaving her charge, she is very careful to cover the whole with dried leaves in such a manner as to make it very difficult even for one who has watched her motions to indicate the exact spot. Nor is she easily driven from her post by the approach of apparent danger; but if an enemy appears, she crouches as low as possible, and suffers it to pass. They seldom abandon their nests on account of being discovered by man; but should a snake or other animal suck one of the eggs, the parent leaves them altogether. If the eggs be removed, she again seeks the male and

recommences laying, though otherwise she lays but one set of eggs during the season. Several turkey-hens sometimes associate, perhaps for mutual safety, deposite their eggs in the same nest, and rear their broods together. Mr. Audubon once found three females sitting on forty-two eggs. In such cases the nest is commonly guarded by one of the parties, so that no crow, raven, or even polecat dares approach it. The mother will not forsake her eggs, when near hatching, while life remains: she will suffer an enclosure to be made around and imprison her rather than abandon her charge.

As the hatching generally occurs in the afternoon and proceeds but slowly, the first night is commonly spent in the nest; but afterward the mother leads them to elevated dry places, as if aware that humidity, during the first few days of their life, would be dangerous to them, they having then no other protection than a delicate, soft, hairy down. In rainy seasons wild turkeys are scarce, because when completely wetted the young rarely survive. At the expiration of about two weeks the young follow their mother to some low, large branch of a tree, where they nestle under her broadly-curved wings. The time then approaches when they seek the open ground or prairie land during the day in search of berries and grasshoppers, thus securing a plentiful supply of food, and enjoying the genial influence of the sun. The young turkeys now grow rapidly, and in the month of August, when several broods flock together and are led by their mothers into the forest, they are stout, and able to secure themselves from the unexpected attacks of their enemies, by rising quickly from the ground and reaching with ease the upper limbs of the tallest tree.

It is rather surprising that, though the introduction of this bird into Europe is comparatively modern, its origin has been so much lost sight of, that eminent naturalists of the last century expressed themselves with great uncertainty concerning its native country. Thus Belon, Aldrovand, Gessner, Ray, and others, thought that it came originally from Africa and the East Indies, and endeavored to recognise it in some of the domestic birds of the an-

cients But its American origin is now clearly ascertained. This bird was sent from Mexico to Spain early in the sixteenth century ; and from Spain it was introduced into England in 1524. Since that period they have been bred with so much care, that in England, as we read in ancient chronicles, their rapid increase rendered them attainable at country feasts, where they were a much-esteemed dish, so early as 1585.

THE GRANDEUR OF GOD.

"At His command the lurid lightning flies,
Shakes the firm globe, and fires the vaulted skies."



NOT one of the four elements so magnificently displays the grandeur of God as that of fire. Well might the ancients suppose it to constitute the human soul, for they are similar in their operations. The soul pervades every part of the body, and fire exists in every particle of nature. Like the soul, we observe it quiescent in one body and in another we see it in all its terrific sublimity. Like the soul, we see it in one instance a slave, and in another the master of the world. As the soul is the centre of motion to the human body, so is the burning sun to the solar system. When the soul ceases to move the body, every limb is motionless ; and when Joshua commanded the sun to stand still on Gibeon, the earth and moon were still, for they receive their motion from his diurnal revolution. The language of Scripture is correct, for though the sun is fixed in his orbit, he has diurnal motion, and when that ceases, his attendant planets must cease. This has been an eye-sore to many deists. Let them reflect that when the large wheel of a mill is at rest, the whole of the machinery is at rest also. We see the operations of the soul, but not its essence ; and we see the effects of fire, but not its substance.

Fire is the mighty autocrat of the uni-

verse—its throne is the footstool of God—and its empire is the grand alembic of nature. Like the Olympian Jove when he arose and rocked the skies with his wrath, it sends forth its herald into the stormy clouds, and shakes the pillars of the universe with its tremendous roar. When the spirit of the storm is roused, it goes forth to battle—it awakens the deep thunders of the artillery of heaven—and sets the skies on fire. The clash of resounding strife rings in our ears. The mighty master comes forth from the dark dungeon in which he was chained, he rides round the ethereal dome in his rapid car wheeled by the whirlwinds, and the halls of heaven echo with the crash of clouds. The mighty monarchs of the earth tremble when the dreadful autocrat levels his artillery at the globe. It was the same autocrat with whom the immortal Franklin made a league, and entered into amicable negotiations. He sent forth his ambassador to the gloomy palace of the autocrat, who was conducted to his presence in a chariot of glass. Peace was settled between them—the dark storm of elemental war rolled away—and the universal rainbow banner was hung out in the east. But the autocrat escaped from the dungeon of the philosopher ; he was seen again in battle with the spirits of the storm : and Franklin raised his bayonets against him from every steeple. He was again seen enveloped in his grand and brilliant fireworks in the heavens, and scattering his thunderbolts in every direction. Such is electricity !

We dwell peaceably on the surface of the earth, while oceans of fire roll beneath our feet. In the great womb of the globe the everlasting forge is at work. How dreadful must an earthquake be, when we are told by Pliny that twelve cities in Asia Minor were swallowed up in one night ! Not a vestige remained : they were lost in the tremendous maw for ever ! Millions of human beings have been swallowed up while flying for safety. In the bowels of the earth the great Jehovah performs his wonders, at the same moment that he is firing the heavens with his lightnings. His thunders roll above our heads and beneath our feet, where the eye of mortal man never penetrated. In the vast vor-

tex of the volcano the universal forge empties its melted metals. The roar of Etna has been the knell of thousands, when it poured forth its cataract of fire over one of the fairest portions of the earth, and swept into ruins ages of industry. In the reign of Titus Vespasian, A. D. 79, the volcano of Vesuvius dashed its fiery billows to the clouds, and buried in the burning lava the cities of Herculaneum, Stabice, and Pompeii, which then flourished near Naples. The streets of Pompeii were paved with lava, and it has been discovered that its foundation is composed of the same—proving that the spot had been deluged previous to the birth of Christ. In the streets once busy with the hum of industry, and where the celebrated ancient walked, the modern philosopher now stands and ruminates upon fallen grandeur. While the inhabitants were unmindful of the danger which awaited them—while they were busied with schemes of wealth and greatness—the irresistible flood of fire came roaring from the mountain, and shrouded them in the eternal night. Seventeen hundred years have rolled over them, and their lonely habitations and works remain as their monuments. They are swept away in the torrent of time; the waves of ages have settled over them; and art alone has preserved their memory. Great God, how sublime are thy works! How grand are thy operations! How awful thy wrath! Nations can not stand against thee—a world is but an atom in thy sight!

THE ISLAND OF CAPRI.



HIS most picturesque of islands is situated under the same meridian as the city of Naples, which it immediately faces, and from almost all parts of which it is visible.

It is, indeed, one of the finest and most striking features of the rich and varied scenery which surrounds that capital. It stands at the entrance of the Neapolitan gulf, almost on the line of the horizon; it

is distant about two and a half miles from Cape Campanella, which terminates the bold promontory where Sorrento, Amalfi, and other towns of old fame, are situated; it is about twelve miles from Cape Miseno on the other side of the bay, and rather more than twenty from the city of Naples at the end of the bay. It is composed of hard, calcareous rocks, which are disposed in two picturesque masses with a considerable break or hollow between them. The highest of these two masses, which is to the west, and is called Anacapri, rises between sixteen and seventeen hundred feet above the level of the sea. The whole of the island, when seen at a little distance, looks so precipitous and inaccessible, that the stranger is disposed to wonder how the little towns and white villages he sees on the face of its cliffs ever got there. The color of the masses of rock, when not affected by the glow of sunset, is a pale, sober gray. Tracing all the indents and sinuosities of the rocks, the circumference of the island does not exceed nine miles; yet within this narrow space is crowded an astonishing variety of scenic beauties, remains of antiquity, and historical recollections. The entire surface of Capri is wild, broken, and picturesque. The ancient name of the island was Capræ, and it is said it was so called from being inhabited by wild goats. According to antiquaries, its first human inhabitants were a colony of Greeks from Epirus, who, after many ages, were dispossessed by the citizens of Neapolis (Naples), which then formed part of Magna Græcia, and which, like all the places of note in that portion of Italy, owed its origin to the Greeks. The Roman emperor Augustus seems to have taken entire possession of the island for himself, and to have given the Neapolitan citizens lands in the neighboring island of Ischia as an equivalent. Suetonius, the historian, has recorded a visit to Capri made by Augustus at the close of his life. With a shattered constitution and broken spirits, the world's master left Rome to find a place of quiet rest. Having recruited his spirits a little at Astura, on the shores of the Tyrrhenian sea, and near the mouth of the Tiber, he coasted Campania Felix, and, with a few chosen friends, arrived at



Island of Capri.

Baiæ. Here he took shipping for Capræ. As his galley shot across the Puteolan bay, it was met by a trading-vessel from Alexandria in Egypt, the crew of which, aware of the monarch's approach, had dressed themselves in white, and crowned their heads with chaplets; and, when he was still nearer to them, they burned incense before him, swearing to live for him, and for him to navigate the seas. These testimonials of affection—or this adulation—cheered for a moment the dying emperor. He distributed money among his followers, desiring them to spend it in purchasing the Alexandrian merchandise. At Capri, Augustus, determining to forget the cares of government, gave up his whole soul to ease and affable intercourse; but this secession from toil, and the enjoyment of the tranquillity and the balmy atmosphere of the place, and the magical scenery around him, could not restore the old and wornout man, who died shortly after at the town of Nola in Campania, and almost within sight of the island.

Capri is, however, much more memorable as being the constant retreat for several years of Augustus's successor, the execrable Tiberius. For the honor of human nature, it is to be hoped that those who have described the life and impurities of this systematic tyrant and debauchee, have in some instances sacrificed truth to eloquence and effect: but still enough will remain to excite our abhorrence, and our regret that his name should be associated with so beautiful a spot of earth. Shut up with the infamous ministers of his tyranny and lust in this rocky, inaccessible island, Tiberius ruled the vast Roman empire. It was here he committed or ordered some of the most atrocious of his cruelties; it was here he wrote the "verbose and grand epistle" to the senate at Rome, immortalized in its infamy by Juvenal; it was here the arbiter of the fate of millions trembled in his old age at what might be his own destiny, and sat on "the august rock of Capræ with a Chaldean band"—a band of astrologers and impostors—to consult the stars. He here built twelve palaces or villas, which were all strongly fortified, and erected many other works, the ruins of which still bear his name. The poor islanders of the present day, indeed, at-

tribute every ancient building or fragment found on the island to "Tiberio Cesare," whom they amusingly call "emperor of Capri, and king of Rome." It is also very amusing to hear how they talk traditionally of the tyrant, and of the deeds and vices recorded by Tacitus, Suetonius, and Juvenal.

The sail from Naples to Capri on a fine summer evening, when favored by the *vento di terra*, or land breeze from the main, is one of the most delightful that can be imagined. The only accessible point in the island is called the Sbarco di Capri, or the landing-place. This is below the town of Capri, to which there is an ascent by means of a rude Cyclopean flight of steps, steep and rugged in the extreme. A few fortifications might render the island altogether inaccessible to an enemy, and entitle Capri to the name that was commonly given to it during the last war of Napoleon; viz., the Little Gibraltar. During a certain part of that long struggle, when the French arms had driven the king of the Two Sicilies from Naples to Sicily, the English held the island for that sovereign. They kept possession of it during the whole of the short reign at Naples of Joseph Bonaparte; but when he went to Spain, and Murat replaced him in Italy, it was attacked with an imposing force, and, being most absurdly defended, it fell into the hands of the French.

The principal town, or, as it is pompously called, the "metropolis of Capri," stands on a shelving rock toward the east of the island. It consists of a group of some two or three hundred small but tolerably neat houses, five or six churches and chapels, with a confined piazza, or square, in the midst. It is surrounded by vineyards and orchards, and some small olive-groves stand on ledges of the cliffs above it. There is only one more town in the island. This is called Anacapri, and is situated high up, on a narrow ledge of the western mass of rock that goes by the same name. The fishermen, sailors, and traders, live in the chief town, and the lower parts of the island and Anacapri are almost solely inhabited by frugal, industrious peasants. It is one of the cleanest places that eye can behold. Its inhabitants communicate with the other town and

all the east of the island by means of a flight of five hundred and thirty-eight steps, which zigzags in a curious manner down the face of a precipice. On a still loftier precipice, in the rear of the town of Anacapri, are the picturesque ruins of a castle of the middle ages.

The villages—if groups of three or four vine-dressers' houses may be so called—are nestled here and there in little hollows, or are perched on steps in the cliffs, chiefly on the eastern half of the island. Wherever it has been possible to make them grow, they are surrounded by trees and vineyards. The persevering industry of the islanders is very admirable. By hewing out rocks here—by piling them up to form terraces and retain the scanty soil there—by removing the earth from places where it was exposed to be washed away, and depositing it in well-defended, secure places—they have covered considerable patches of the northern front of Capri with beauty and fertility. The back of the island is so precipitous, that it is altogether impracticable. The cultivable parts produce most kinds of vegetables and fruits, a small quantity of excellent oil, and wine in abundance. The wine, which is well known to all who have resided at Naples, is of two sorts—*Capri rosso* and *Capri bianco*—or red and white Capri. The quality of both is very good, being devoid of that volcanic, sulphurous flavor common to most of the wines produced near Naples.

Quails form another important article of export. These birds of passage, which come in countless flights from the coast of Africa in spring, and return thitherward in autumn, are caught on the island in large nets spread out in hollows on the tops of the rocks, through which, season after season, the quails are sure to pass. In some years, as many as one hundred thousand of these delicate birds, without counting those consumed at home, have been sent to the Neapolitan market. Capri, which is now united to the see of Sorrento, once had a bishop of its own; and, in former days, that dignitary's revenue was derived almost entirely from the trade in quails.

In 1826, the whole population of the island amounted to about four thousand

souls. There were two or three schools established by government. The people seemed very healthy, contented, and cheerful—free and equal in their intercourse with one another—and, like most islanders, much attached to the place of their birth. None of them could be called rich, even according to the low scale of that part of the world, but then very few were abjectly poor. Like the inhabitants of the contiguous peninsula, the Sorrentini, the Amalfitani, &c., the people of Capri invariably leave an agreeable recollection in the mind of the traveller.

The bold, perpendicular cliff at the eastern extremity of the island, which is correctly represented in our engraving, is the the too-celebrated *Saltus Caprearum*, over which, if history speaks truly, Tiberius was accustomed to have his tortured victims driven. The cliff still retains its name, Italianized, the islanders always calling it "*Il Salto*," or the leap. It rises seven hundred feet above the level of the sea. Not far from the brow of this cliff are very considerable remains of the *Villa Jovis*, one of the tyrant's twelve mansions, which all stood on this half of the island. The guides assure the stranger that some arched subterranean chambers, communicating with one another, that are found here, were the *torturing dungeons* of Tiberius. A fine mosaic pavement, some columns of *giallo antico*, a Greek statue of a nymph, with many cameos and intaglios, were found at the *Villa Jovis* many years since. Indeed, this small island and these Tiberian villas, of which we need not give a minute description, as little remains of them but sub-structures and dismal cells, have contributed largely to modern museums, churches, and palaces. The four magnificent columns of *giallo antico*—and all of one piece—that now decorate the chapel of the king of Naples in the palace of Caserta were dug up in one of the villas. A splendid mosaic, which Murat's wife, Caroline Bonaparte, caused to be removed and laid down as a flooring to her own boudoir in the palace at Portici, was found in another; and each of the villas, from amid their crumbling ruins, have furnished rosso, giallo, and verde antico, lapis lazuli, other beautiful stones, and a peculiar sort of marble called Tiberian, in

Caverna Asunta, in the Island of Capri.



wonderful profusion. Statues and busts in marble and bronze, and of exquisite workmanship, medals and bassi-relievi, and other objects of art, have also been found and carried away in great quantities during the course of centuries. The mosaics and Corinthian capitals of the Tiberian villas are especially considered as models of perfection of their kind. All these twelve magnificent villas were included in a space, the circumference of which does not exceed four miles. The wealth of the emperor was employed for years in erecting and adorning them.

The very curious cavern represented in the engraving was recently and accidentally discovered. The water in the cavern and the stalactites on its roof are represented as being tinged with the most exquisite blue. Hence its Italian name of "Caverna, or Grotta Azzurra," or "Caverna Blu"—the Blue Cavern.

A low-pitched and narrow aperture in the rocks west of the usual landing-place at Capri, and about one and a half miles distant from it, leads into an immense circular cavern, recently discovered—well worth notice, and distinguished by the name of "La Grotta Azzurra." Persons who visit this sapphire cell are obliged to place themselves horizontally in the little bark destined to convey them through the above low and narrow aperture, which is so small as to excite an alarm of finding darkness within; but, on the contrary, if the day be cloudless, all is light—light that would dazzle, were it not blue. The color of the water which fills the cavern precisely resembles that of the large bottles of vitriol, with lamps behind them, seen at chymists' windows; and this water appears to act like the lens of a telescope, by conducting the rays of the sun and the reflection of the brilliant skies of Magna Græcia into the cavern. After the eye has been for a few moments accustomed to a light so magical, the stupendous vaults of this gigantic bath are discernible, richly studded with stalactites, and assuming, in consequence of a strong reflection from the transparent blue water, exactly the same tint. The cavern contains broken steps leading to a subterranean passage, the length of which is unknown, it being impossible to reach the

end, owing to an impediment formed by earth and stones. Masonry seems to have been employed in the construction of the steps and passage, which probably communicated either with one of Tiberius's villas or that of Julia, the niece of Augustus; but the cavern, although it may have been used as a bathing-place, is evidently the work of nature.

DISCIPLINE OF THE EYES.



VISION is one of the most important and the most comprehensive of the senses, yet it is one that can not be exercised in its full efficiency without considerable practice and self-tuition. This fact, well known in theory, was first elucidated by experiment in the case of the boy who was cured of blindness at the age of fourteen. A case of equal interest occurred lately in London, a report of which by Dr. Franz is given in the Philosophical Transactions. The leading results in both cases exactly coincide.

If a person totally blind from birth were, at a mature age, and in possession of all his other faculties, at once to obtain the full use of his eyes, one would be apt to imagine that he would perceive objects around him just as other grown-up persons usually do. This, however, is by no means the case. There is none of the senses so deceptive, taken by itself, as that of vision. No just idea can be formed of any object by the eye alone; and it is only by the aid and experience of the other senses, as well as by repeated practice in vision, that an accurate notion of even the simplest object can be obtained. To the inexperienced eye all objects are flat, or seen only as surfaces. All objects, too, however near or distant, appear as if in one plane; so that form, size, distance, are all indistinguishable. Even color depends upon proximity to the eye, for the brightest objects at a remote distance appear dim and almost colorless.

The case operated upon by Dr. Franz was that of a young gentleman of seventeen years of age, the son of a physician. He had been blind from birth. His right eye was quite insensible to light, and in that state called *amaurotic*. His left eye contained an opaque lens, or cataract: with it he could distinguish a strong light, and even vivid colors, but he had no idea of the forms of objects. It was on this left eye that the operation was performed, and fortunately it proved successful. As the young man possessed an intelligent mind, and had been carefully educated as far as his condition would allow, the opportunity was a favorable one to test the accuracy of former experiments.

"On opening the eye," says Dr. Franz, "for the first time on the third day after the operation, I asked the patient what he could see. He answered that he saw an extensive field of light, in which everything appeared dull, confused, and in motion. He could not distinguish objects, and the pain produced by the light forced him to close the eye immediately." Two days afterward the eye was again exposed. "He now described what he saw as a number of opaque watery spheres, which moved with the movements of the eye; but when the eye was at rest, remained stationary, and then partially covered each other. Two days after this the eye was again opened: the same phenomena were again observed, but the spheres were less opaque, and somewhat transparent—their movements more steady, and they appeared to cover each other more than before. He was now for the first time capable, as he said, to look through the spheres, and to perceive a difference, but merely a difference, in the surrounding objects. When he directed his eye steadily toward an object, the visual impression was painful and imperfect, and the intolerance of light obliged him to desist. The appearance of spheres diminished daily; they became smaller, clearer, and more pellucid, and after two weeks disappeared. Dark brown spots (*muscæ volitantes*) floated before the eye every time it was opened; and when shut, especially toward evening, dark blue, violet, and red colors, appeared in an upward and outward direction."

As soon as the state of the patient per-

mitted, the following experiments on his sense of vision were instituted. They were performed in succession, and on different days, so as not to fatigue the eye too much. In the first experiment, silk ribands of different colors, fastened on a black ground, were employed to show, first the primitive, and then the complementary colors. The patient recognised the different colors, with the exception of yellow and green, which he frequently confounded, but could distinguish when both were exhibited at the same time. Gray pleased him best, because this color, he said, produced an agreeable and grateful sensation. The effect of red, orange, and yellow, was painful, but not disagreeable; that of violet and brown not painful, but very disagreeable; the latter he called ugly. Black produced subjectioned colors, and white occasioned the recurrence of *muscæ volitantes* in a vehement degree.

In the second experiment, the patient sat with his back to the light, and kept his eye closed. A sheet of paper, on which two strong black lines had been drawn—the one horizontal, the other vertical—was placed before him at the distance of about three feet. He was now allowed to open the eye, and, after attentive examination, he called the lines by their right denominations. When he was asked to point out with his finger the horizontal line, he moved his hand slowly, as if feeling, and pointed to the vertical line: but after a short time, observing his error, he corrected himself; the outline in black, of a square six inches in diameter, within which a circle had been drawn, and within the latter a triangle, was, after careful examination, recognised and correctly described by him. When he was asked to point out either of the figures, he never moved his hand directly and decidedly, but always as if feeling, and with the greatest caution: he pointed them out, however, correctly. A line consisting of angles, or a zigzag and a spiral line, both drawn on a sheet of paper, he observed to be different, but could not describe them otherwise than by imitating their forms with his finger in the air. He said he had no idea of these figures.

In a third experiment, light being admitted into the room at one window only,

to which the patient's back was turned, a solid cube and a sphere, each four inches in diameter, were placed before and on a level with the eye at the distance of three feet. Allowing him to move the head in a lateral direction no more than was necessary to compensate the point of view of the right eye, which was visionless, he was now desired to open his eye, and say what the objects were. After attentively examining them, he said he saw a quadrangular and a circular figure, and after some consideration he pronounced the one a square and the other a disk. His eye being again closed, the cube was taken away, and a flat disk of equal size placed next to the sphere. On opening his eye, he observed no difference in these objects, but regarded them both as disks. The solid cube was now placed in a somewhat oblique position before his eye, and close beside it a figure cut out of pasteboard, representing a plain outline prospect of the cube when in this position: both objects he took to be something like flat quadrates. A pyramid placed before him with one of its sides toward his eye, he saw as a plain triangle. This object was now turned a little, so as to present two of its sides to view, but rather more of one side than of another. After considering it for a long time, he said that this was a very extraordinary figure: it was neither a triangle, nor a quadrangle, nor a circle. He had no idea of it, and could not describe it. When subsequently the three solid bodies, the sphere, the cube, and the triangle, were placed in his hands, he was much surprised that he had not recognised them as such by sight, as he was well acquainted with these solid mathematical figures by touch.

There was another peculiarity in his impressions: when he first began to look at objects, they all appeared to him so near, that he was sometimes afraid of coming in contact with them, though many were in reality at a great distance. He saw everything much larger than he had supposed, from the idea obtained by his sense of touch. All moving, and especially living objects, such as men and horses, appeared to him very large. If he wished to form an estimate of the distance of objects from his own person, or of two ob-

jects from each other, without moving from his place, he examined the objects from different points of view, by turning his head to the right and to the left. Of perspective in pictures, he had, of course, no idea. He could distinguish the individual objects in a painting, but could not understand the meaning of the whole picture. It appeared to him unnatural, for instance, that the figure of a man represented in the front of the picture should be larger than a house or a mountain in the background. Every surface appeared to him perfectly flat. Thus, though he knew very well by his touch that the nose was prominent, and the eyes sunk deeper in the head, he saw the human face only as a plane. Though he possessed an excellent memory, this faculty was at first quite deficient as regarded vision: he was not able, for example, to recognise visitors unless he heard them speak, till he had seen them very frequently. Even when he had seen an object repeatedly, he could form no idea of its visible qualities in his imagination, without having the real objects before him. Formerly, when he had dreamt of persons—of his parents, for instance—he felt them, and heard their voices, but never saw them; but now, after having seen them frequently, he saw them also in his dreams.

The human face pleased him more than any other object presented to his view. The eyes he thought most beautiful, especially when in motion; the nose disagreeable, on account of its form and great prominence; the movement of the lower jaw in eating he considered very ugly. Although the newly-acquired sense afforded him many pleasures, the great number of strange and extraordinary sights was often disagreeable and wearisome to him. He said that he saw too much novelty, which he could not comprehend; and even though he could see both near and remote objects very well, he would nevertheless continually have recourse to the use of the sense of touch.

Such are the nature of our impressions in early infancy, before vision becomes to us a true exposition of the forms and relative positions of objects. And such is the effect of habit and association, that the actual deceptions which the sense of

sight, when taken alone, is continually presenting to us, can only be appreciated or detected by the philosophic inquirer.

HOW TO GET RICH.



LMOST every merchant has at some point of his life been rich, or at least prosperous; and if he is poor now, he can see very well how he might almost certainly have avoided the disasters which overthrew his hopes. He will probably see that his misfortunes arose from neglecting some of the following rules:—

Be industrious. Everybody knows that industry is a fundamental virtue in the man of business. But it is not every sort of industry which tends to wealth. Many men work hard to do a great deal of business, and after all make less money than they would if they did less. Industry should be expended in seeing to all the details of business: in carefully finishing up each separate undertaking, and in the maintenance of such a system as will keep everything under control.

Be economical. This rule also is familiar to every one. Economy is a virtue to be practised every hour in a great city. It is to be practised in pence as much as in dollars. A shilling a day saved, amounts to an estate in the course of a life. Economy is especially important in the outset of life, until the foundations of an estate are laid. Many men are poor all their days, because when their necessary expenses were light, they did not seize the opportunity to save a small capital, which would have changed their fortunes for the whole of their lives.

Stick to your own business. Let speculators make their thousands in a year or a day—mind your own regular trade, never turning from it to the right hand or to the left. If you are a merchant, a professional man, or a mechanic, never buy lots

or stocks unless you have surplus money which you wish to invest. Your own business you understand as well as other men; but other people's business you do not understand. Let your business be some one which is useful to the community. All such occupations possess the elements of profit in themselves, while mere speculation has no such element.

Never take great hazards. Such hazards are seldom well balanced by the prospects of profit; and if they were, the habit of mind which is induced is unfavorable, and generally the result is bad. To keep what you have, should be the first rule; to get what you can fairly, the second.

Don't be in a hurry to get rich. Gradual gains are the only natural gains, and they who are in haste to be rich, break over sound rules, fall into temptation and distress of various sorts, and generally fail of their objects. There is no use in getting rich suddenly. The man who keeps his business under control, and saves something from year to year, is always rich. At any rate, he possesses the highest enjoyment which riches are able to afford.

Never do business for the sake of doing it and being accounted a great merchant. There is often more money to be made by a small business than a large one; and that business will in the end be most respectable which is most successful. Do not get deeply in debt; but so manage as always, if possible, to have your financial position easy, so that you can turn any way you please.

Do not love money extravagantly. We speak here merely with reference to being rich. In morals, the inordinate love of money is one of the most degrading vices. But the extravagant desire of accumulation induces an eagerness, many times, which is imprudent, and so misses its object from too much haste to grasp it.

INSANITY.—In Italy there is one insane man to 4,879; in France, one to 1,000; Wales, one to 800; England, one to 862; Scotland, one to 574; Russia, one to 666; United States, one to 500. Among the Chinese, insanity is almost unknown.



Shaddock Tree.

THE SHADDOCK-TREE.



THE shaddock (*Citrus decumana*) is one of the four distinct or leading species into which the orange-tribe of plants is divided. The shaddock is larger than the orange, both in the tree and the fruit. The tree has spreading, prickly branches: the leaves are egg-shaped and rather acute, and the leaf-stalks are furnished with remarkably large heart-shaped wings: the flowers are white, with reflexed petals, and very sweet-scented. The fruit, which is from two and a half to eight inches in diameter, is spheroidal, of a greenish yellow color, and has twelve or more cells, containing, according to the variety, either a red or white pulp. The juice is sweet in some varieties, and acid in others; it is rather insipid, but is excellent for quenching thirst. The rind, which is of a disagreeable bitter flavor, is very thick, in consequence of which the fruit can be much longer preserved during sea-voyages than that of any other species of citrus.

The shaddock is a native of China and the neighboring countries, where the name of "sweet-ball" is given to it. Its common name is derived from Captain Shaddock, who brought it from China to the West Indies. It has, however, been neglected there, and is now but seldom entitled to its oriental name of sweet-ball. Instead of propagating the shaddock by budding, as is done in China, and which is the only way it can be improved, or even kept from degenerating, they have reared it from seed, and have in consequence only obtained a harsh and sour sort of little value. The shaddock came to England from the West Indies, and was cultivated by Miller in 1739. In the West it is certainly the least valuable of the genus to which it belongs; and for the attention which it has received it is chiefly indebted to the showiness both of the tree and the fruit. In its native country the fruit attains a much greater size than in the West. Thunberg says that it is commonly of the size of a child's head in Japan; Dr. Sickler de-

scribes it as weighing fourteen pounds, and as having a diameter of from seven to eight inches. Their accounts are confirmed by Bishop Heber, who thus describes the shaddock of India: "The shaddock resembles a melon externally, but it is in fact a vast orange, with a rind of two inches thick, the pulp much less juicy than a common orange, and with rather a bitter flavor—certainly a fruit which would be little valued in England, but which in this burning weather I thought rather pleasant and refreshing." The shaddock is sometimes sold under the name of "forbidden fruit."

PHOSPHORUS.



PHOSPHORUS, an elementary non-metallic substance, was accidentally discovered by BRANDT, an alchemist of Hamburg, while he was attempting to discover, in human urine, a substance capable of

converting silver into gold; it was afterward discovered by Kimmel, who knew that Brandt had prepared it from urine, but he knew not Brandt's method of preparation; afterward it was discovered by Boyle, an English chymist.

Under the name of English phosphorus, it was, for some years, supplied to all Europe, by Godfrey Hawkitz, the assistant of Boyle.

Phosphorus was prepared from urine, by the action of acetate or nitrate of lead, which is decomposed, and a phosphate of lead precipitated: this being well washed, dried, and distilled in a stone-ware retort, yields phosphorus. In the year 1796, Gahn discovered that it was contained in bones, in union with lime; Scheele soon after contrived the following process by which it is now obtained from this source.

The bones are calcined (to destroy the animal matter) till they become white, in which state they contain phosphate of lime, with a little carbonate of lime; this substance is then decomposed by about

two thirds of its weight of sulphuric acid ; to this is added water, and the insoluble sulphate of lime precipitates, and is separated by filtration from the superphosphate of lime in solution : this liquid is then evaporated to the consistency of sirup, when it is intimately mixed with powdered charcoal, to form a thick paste ; it is then well rubbed in a mortar, and having been dried in an iron vessel, it is introduced into an earthenware retort, the beak of which is immersed in water ; the heat is gradually raised till the retort be heated to whiteness. During this process, gaseous bubbles issue from the beak of the retort, some of which rise to the surface of the water and take fire ; at last a substance, having the appearance of melted wax, drops from the beak of the retort, and congeals in the water : this is *phosphorus*, the formation of which depends on the union of carbon with oxygen at a high temperature ; these two gases unite, and form carbonic oxide, consequently the phosphorus is all along accompanied with that gas.

Wöhler has recommended the use of ivory black, which is a mixture of phosphate of lime and charcoal (carbon). His method was to calcine the ivory black with fine quartz sand and a little ordinary charcoal, at a high temperature ; to the cylinder containing the materials, a bent tube of copper was fixed, one end of which descended into a vessel of water.

At the ordinary temperature, phosphorus is a soft substance, of a light amber color, and perhaps white, if absolutely pure ; when cut with a knife, it appears like wax : by the action of light it assumes a red tint. It undergoes oxydation in the open air, and white vapors of an unpleasant and suffocating odor arise from it. In the dark, they are luminous, and attended with a sensible degree of heat ; during their exhalation, the phosphorus is covered with small drops of *phosphorous acid*, produced by attracting oxygen from the atmosphere ; it may, in consequence of its low degree of combustion, undergo spontaneous fusion ; it is necessary to be cautious in handling phosphorus, as a burn from it is exceedingly severe. Although phosphorus is so readily oxydised in the atmosphere, it may be kept from combustion even at a temperature of 200° (Gra-

ham), by the presence of certain gases, such as olefiant gas, vapors of naphtha, of sulphuric ether, and oil of turpentine. In pure oxygen gas it may be kept without undergoing oxydation.

Phosphorus affords some of the most brilliant experiments :—

Experiment 1. Rub together in a mortar ten grains of chlorate of potash, and one grain of phosphorus : violent detonations will result.

2. Put together, in a glass, a little chlorate of potash and phosphorus ; pour gently on them, so as not to displace the materials, a little water ; and, by means of a drop-tube, let fall immediately on them : little strong sulphuric acid : combustion under water will result.

3. To the ingredients of the last experiment add a small piece of zink, then pour on the sulphuric acid.

4. To the same materials add a small piece of phosphoretted lime : and combination, both on the surface and in the water, will result.

5. Take the quantity of chlorate of potash and phosphorus named in experiment 1 ; mix them intimately and carefully together on a piece of paper by means of a knife ; throw the mixture into a little strong sulphuric acid : the contact of these cold substances will produce detonation and flame.

6. Into a retort put a little water and potash ; boil the mixture, and drop in a piece of phosphorus ; plunge the mouth of the retort under water : *phosphoretted hydrogen gas* will rise to the surface of the water, and immediately take fire.

Phosphorus is soluble in oil and ether ; the solution in oil may with impunity be rubbed on any part of the body. If the solution in ether, in small portions, be poured on hot water, a beautiful light will result. This experiment should be performed in a dark room.

Phosphorus unites with the alkalies and earths ; perhaps it is most readily united with lime.

In a glass tube, sealed at one end, put some pieces of phosphorus, and over these some recently-made quicklime in small pieces ; put a piece of paper loosely into the mouth of the tube ; put a coating of clay over that part of the tube which con-

tains the lime, and expose it to heat in a chaffing-dish of charcoal; then apply heat to the phosphorus, and the vapors will unite with the heated lime, and form phosphoret of lime. If *carbonate of lime* be used instead of *quicklime*, the carbonic acid will be decomposed by the phosphorus, which will unite with the oxygen and form phosphoric acid; this unites with the lime, and forms phosphate of lime. The carbon is deposited as charcoal.

The following brilliant experiment is by Davy:—

Into an ale-glass put one part of phosphoret of lime, in pieces about the size of a pea (not in powder), and add to it a half part of hyper-oxygenized (from *veg.*, over) muriate of potash. Fill the glass with water, and put into it a funnel, with a long pipe, or narrow glass tube, reaching the bottom. Through this pour three or four parts of strong sulphuric acid, which will decompose the hyper-oxygenized salt, and the phosphoret also decomposing the water at the same time, flashes of fire dart from the surface of the fluid, and the bottom of the vessel is illuminated by a beautiful green light.

Phosphorus unites with oxygen in four proportions: namely, oxide of phosphorus ($2P + O$), two equivalents of phosphorus and one of oxygen; hypophosphorous acid not insoluble ($P + O$), one equivalent of phosphorus and one of oxygen; phosphorous acid ($P + 3O$), one equivalent of phosphorus and three of oxygen; and phosphoric acid ($P + 5O$), one equivalent of phosphorus and five of oxygen. The last is a powerful acid.

The oxide of phosphorus is obtained by burning phosphorus in the air or in oxygen gas (when it affords a brilliant light).

It is a yellow powder, not soluble in water or alcohol.

Phosphorous acid may be obtained by exposing to the atmosphere a stick of phosphorus in a bent tube, one end of which terminates in an empty glass bottle; after a time, the phosphorus will have disappeared, and a liquid will be found in the bottle: this is *phosphorous acid*. If several sticks of phosphorus be exposed to the atmosphere at the same time, they must be kept separate by putting each into

a small glass tube, rather larger than the stick of phosphorus.

Pure phosphoric acid may be obtained by adding gradually to nitric acid heated on a matrass, a few pieces of phosphorus; the nitric acid is decomposed, and the phosphorus unites with it and forms *phosphoric acid*.

If any nitric acid remain undecomposed, it may be separated by distillation in a retort, when a dry mass of phosphoric acid will remain; if pure, it will readily dissolve in water.

Phosphorous acid unites with the alkalis and earths, and forms the class called *phosphites*.

Phosphoric acid unites with the alkalis and earths, and forms the class called *phosphates*. The most important, and the only one used in medicine, is phosphate of soda.

Phosphorus is exceedingly poisonous, even when taken in small quantities, as in the stomach it undergoes combustion. In the treatment of a case, the stomach is usually filled with liquid, having magnesia in solution, which neutralizes the phosphoric acid formed, and vomiting results.

GIBRALTAR.



ESIDES its admirable advantages as a place of strength, this promontory may be said, owing to the narrowness of the strait upon which it juts out, to command, not only the corner of Andalu-

sia immediately under it, but the whole of the western coast of Spain, comprising nearly two thirds of the whole maritime circumference of that country. It effectually cuts off all communication by sea between that part of Spain which is bounded by the Mediterranean and those parts which are bounded by the Atlantic.

It appears, however, to have been late before the importance of this rock was discovered. The ancients had a fable that Europe and Africa were originally joined



The Rock of Gibraltar.

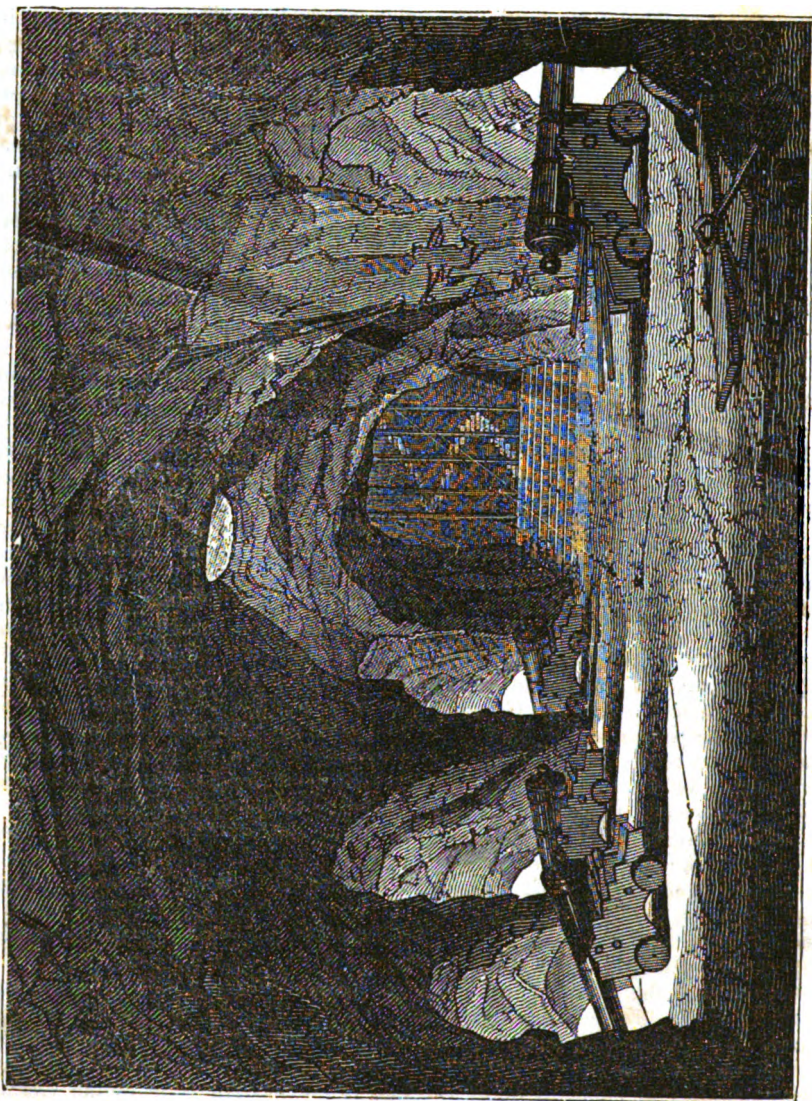
at this point, and that the two continents were riven asunder by Hercules, and a passage thereby opened between the Atlantic and the Mediterranean. Gibraltar, under the name of Calpe, and Mount Abyla opposite to it on the African coast, were called the Pillars of Hercules, and appear to have been in very early ages regarded by the people dwelling to the east of them, including the Carthaginians, the Greeks, and the Romans, as the western boundary of the world. It was probably long before navigation penetrated beyond this limit. Even in after-times, however, when Spain became well known to the Romans and a province of their empire, we do not read of any fort being erected on the rock of Calpe. It is doubtful if it was even the site of a town. No Roman antiquities have ever been found on the spot or in the neighborhood.

The place appears to have been first seized upon and converted into a military station by the Moors when they invaded Spain in the beginning of the eighth century. From their leader, Tarif, it was in consequence called Gibel-Tarif, or the Mountain of Tarif, of which Arabic name Gibraltar is a corruption. Soon after establishing themselves here, the Moors erected a lofty and extensive castle on the northwest side of the mountain, the ruins of which still remain. Gibraltar continued in the possession of the Moors for between seven and eight centuries, with the exception of about thirty years, during which it was held by the Christians, having been taken soon after the commencement of the fourteenth century by Ferdinand, king of Castile. It was recovered, however, in 1333, by Abomelek, the son of the emperor of Fez, and the Moors were not finally dispossessed of it till the middle of the following century. After that it remained a part of the kingdom of Spain down nearly to our own times.

The promontory of Gibraltar forms the southwestern extremity of the province of Andalusia, running out into the sea in nearly a due south direction for about three miles. The greater part of this tongue consists of a very lofty rock. It rises abruptly from the land to the height of fully thirteen hundred feet, presenting

a face almost perfectly perpendicular, and being consequently from that, its northern extremity, completely inaccessible. The west side, however, and the southern extremity, consist each of a series of precipices or declivities which admit of being ascended. The town, now containing a population of above seventeen thousand persons, is built on the west side. Along the summit of the mountain, from north to south, runs a bristling ridge of rocks, forming a ragged and undulating line against the sky when viewed from the east or west. The whole of the western breast of the promontory is nearly covered with fortifications. Anciently, it is said, it used to be well wooded in many places; but there are now very few trees to be seen, although a good many gardens are scattered up and down both in the town and among the fortifications. A great part of the rock is hollowed out into caverns, some of which are of magnificent dimensions, especially one called St. George's Cave, at the southern point, which, although having only an opening of five feet, expands into an apartment of two hundred feet in length by ninety in breadth, from the lofty roof of which descend numerous stalactical pillars, giving it the appearance of a Gothic cathedral. These caves seem to have been the chief thing for which Gibraltar was remarkable among the ancients. They are mentioned by the Roman geographer, Pomponius Mela, who wrote about the middle of the first century of our era. The southern termination of the rock of Gibraltar is called Europa Point, and has been sometimes spoken of as the termination in that direction of the European continent; but Tarifa Point, to the west of Gibraltar, is fully five miles farther south.

It is impossible for us here to attempt any description of the fortifications which now cover so great a part of this celebrated promontory. Gibraltar was first fortified in the modern style by the German engineer, Daniel Speckel, at the command of the emperor Charles V., toward the close of the sixteenth century. But little of what was then erected probably now remains. Since the place fell into the possession of the English, no expense has been spared to turn its natural advantages to the best



Interior of the Rock of Gibraltar.

account, and additions have repeatedly been made to the old fortifications on the most extensive scale. It is now, without doubt, the most complete fortress in the world.

More than half a century ago Gibraltar was accounted by military men almost impregnable. "No power whatever," says Colonel James in his "History of the Herculean Straits," published in 1771, "can take that place, unless a plague, pestilence, or famine, or the want of ordnance, musketry, and ammunition, or some unforeseen stroke of Providence, should happen." It is certainly now much stronger than it was then. One improvement which has especially added to its security is the formation of numerous covered galleries excavated in the rock, with embrasures for firing down upon both the isthmus and the bay. The interior of part of these works is represented in the engraving.

Gibraltar was taken by an English fleet, under the command of Sir George Rooke and the prince of Hesse Darmstadt, in July, 1704. The project of the attack was very suddenly formed at a council-of-war held on board the admiral's ship, while the fleet was cruising in the Mediterranean, and it was apprehended that it would be obliged to return to England without having performed any exploit commensurate to the expectations with which it had been fitted out. The affair proved a very easy one: the garrison, which consisted of one hundred and fifty men, having surrendered after a bombardment of only a few hours. The assailants lost only sixty lives, the greater part by a mine which was sprung after they had effected a landing. In the latter part of the same year a most resolute effort was made to recover the place by the combined forces of France and Spain, which failed after it had been persevered in for several months, and had cost the besiegers not less than ten thousand men. The loss of the garrison was about four hundred.

At the peace of Utrecht, in 1713, the possession of Gibraltar was confirmed to England. In 1727, however, another attempt, on a formidable scale, was made by Spain to dislodge the foreigners. An army of twenty thousand men having encamped in the neighborhood, the attack

was commenced in February and continued till the 12th of May, when it was put an end to by the general peace. In this siege the garrison lost three hundred in killed and wounded; but the loss of the besiegers was not less than three thousand. The guns in the fortifications, it is worthy of remark, proved so bad, that seventy cannons and thirty mortars burst in the course of the firing.

THE FALLACY OF PROVERBS.

That "Beggars must not be choosers."



NE may as well try to change the motion of the tides as to correct a sentiment which has passed into the familiarity of a proverb. But is there not an error in the

one we have set at the head of this paragraph?

To say that a beggar shall not be the chooser, is the same as to say that a man shall not ask for what he wants. It is denying to the beggar the first principle, the rudiment, the alphabet, of our doctrine of human equality. That a beggar shall not choose? Who shall, then? Who knows what the beggar wants? Who can step into his shoes? Or who would wish to, if he could?

Indeed, it is putting a man on a pretty small allowance, to say that he may beg, but shall not beg for the supply of his wants. Every man who begs is presumed to be a judge of his own feelings; and if he asks the benevolent man for somewhat to appease his hunger, it is but insulting his calamity to offer him a draught to quench his thirst. And then, be it remembered, the beggar has feelings as well as the man who fares sumptuously every day—feelings, too, which are as sacred; and it is a poor compliment to his discernment to tell him that he does not know whether he is hungry or thirsty.

We need no revelation to assure us that when a man asks for bread, it is not suffi-

cient to give him a stone ; and it is anything but humanity to offer him a serpent, when he asks for a fish. If we give a man something different from what he asks for, we do not give it to him as a *beggar*, but because we, by a very strange presumption, claim to know his wants better than himself. We err in this thing. The beggar is and must be the chooser. He knows his wants, and we know our means of giving. We are both the high contracting parties : and if in the negotiation we do not like his terms, we can tell him, in so many words, that *we do not entertain his proposition with favor*. But we have no right to go a step further.

Salesmen sometimes tell their customers, " We know exactly what you want, and we have something which will suit." Gentlemen, you know no such thing ; and you insult your customer, when you show him anything different from what he asks for. But the beggar is on different ground from either of us. He tells his story. His wants are many ; and they are chiselled into his face like the lines and fissures of age upon granite. If we have wherewith to relieve him, let us do it. If we have not, let us " say so, and say no more."

St. Peter, we know, had not " silver and gold ;" but he gave the beggar what was better. When we do as Peter did, then may we answer as Peter did.

If we can restore an eye to the blind, or an arm to the maimed, then we may refuse to the beggar a cup of water or a loaf of bread. But until we have the gift of healing, we do our duty by giving the beggar what he wants, or giving him nothing. And we do him wrong—we reduce him even below the humility incident to his condition, when we turn aside from his entreaties, by hinting to him that icy proverb—that "beggars should not be choosers."

That "*a rolling stone gathers no moss*." To be sure it doesn't, and very glad we are that it is so. Moss is a production of idleness. Machinery that is used gathers no rust. Bags, whose treasures are often counted, take no moth. If moss be a desirable commodity, this proverb is of value to the world. Let the wheels of the universe cease their motion, and the Babel-builders go to their rest, and future gener-

ations will have a harvest. The old gray pyramids must have a stock on hand by this time. For gathering moss, those gigantic pillars are excellent. But for every other purpose, the rolling stone is just the thing. And how easy it is to overthrow the pretensions of this old saw, by a thousand others of a contrary import ! " The still bee gathers no honey."—" The still flint strikes out no spark."—" The still water is not pure." These are clinchers : there is no escaping from them ; and if they do not put to flight the old heresy about "rolling stones," we are no judge. It is all fallacy. It is foolishness, and a lie. The Yankee contradicts the spirit of it in every line of his history. He is a living, constant proof of its folly. He begins "down East," and rolls along till he reaches the base of the Rocky mountains. And nobody questions his shrewdness : he understands himself and his fellows. If he can sell his wares, if his *notions* take with the people, he will stay where he is, and lay his bones with his fathers'. If not, his stakes are up at once, and to-morrow morning he is ready to start for Africa, to civilize the Mendians. In all this he works his card well, and "gathers no moss." He is your true "rolling stone." Moths eat not in his purse, for he keeps the silver rolling. Why should a man settle himself down upon the soil, as if he grew from the earth ? Why be fastened on it, like barnacles to the keel of a vessel ? He is not a part of the soil ; and, while living, was not intended to be a fixture to it. The old proverb is bad in principle, and should never be suffered to creep into a man's political economy. The true policy on the subject is this : if you want the snow-ball to grow larger, *roll it over*.

FEBRUARY.

So named from *Februa*, *Februaca*, or *Februalis*, names of Juno. Our Saxon ancestors named it *Sprout-kele* : meaning, by kele, the kele-wurt, called by us cole-wurt, an herb in great use among our forefathers.

The days are now sensibly lengthened ; the cold generally begins to abate, and the sun has occasionally power enough gradually to melt away the snow and ice. Sometimes a sudden thaw comes on with a south wind and rain, which all at once dissolves the snow. Torrents of water then descend from the hills ; every little brook and rill is swelled to a large stream ; and the ice is swept away with great violence from the rivers.

THE BAY-TREE.



THE bay-tree (*Laurus nobilis*), or, as the French call it, Apollo's laurel, which our engraving represents amid the ruins of that country with the ancient literature and fables of which it is so closely connected,

is a species of the rather extensive tribe of plants which botanists distinguish by the name of *Laurus* (the ancient Latin name of the bay-tree), and which, besides the present, includes several interesting species, such as the cinnamon, camphor, benzoin, &c., which we are not at present required to notice particularly. The geography of the laurel tribe is thus given by Dr. Lindley : " These trees inhabit the tropics of either hemisphere ; in a very few instances only straggling to the northward in North America and Europe. No genus is known to exist in any part of the continent of Africa, except the paradoxical *Cassythia*. This is the more remarkable, as several species of *Laurus* have been found both in Teneriffe and Madeira, and some other genera exist in Madagascar and in the isles of France and Bourbon." Of all the species, the English bay-tree seems the best qualified to struggle with a colder climate than the tribe can in general bear, and is, in fact, the only one that is indigenous in Europe. It is very common in the East, in the isles of Greece, and upon the coast of Barbary. Entire forests of bay-trees exist in the Canaries. It has been perfectly naturalized in Italy

and in the south of France ; and it even bears the British climate very well, forming one of the most desirable evergreens of that country, although its growth is slow.

In its southern habitat the height of the bay-tree sometimes exceeds thirty feet. The leaves are of a rich deep green, highly and pleasantly aromatic ; the flowers are of a pale-yellow color, and are afforded by old trees only ; the fruit is of a nearly black-red color, and about the size of a small cherry—never, we believe, perfected in Britain, but plentiful in Italy. This is one of the trees which have been most celebrated by the ancient poets. Ovid relates, with great beauty, the fable of the change of Daphne into a laurel by Jupiter, to save her from the pursuit of Apollo, who thenceforth adopted the tree as his own :—

—"Because thou canst not be
My mistress, I espouse thee for my tree :
Be thou the prize of honor and renown ;
The deathless poet and the poem crown.
Thou shalt the Roman festivals adorn,
And, after poets, be by victors worn."

In consequence of this dedication to the god of poetry and music, the leaves of the plant were considered a suitable crown for the heads of poets, and came also to be bestowed on triumphant warriors, and on the victors in the Olympic games. Poets, warriors, and kings, continue still to receive the laurel crown in poetry, on statues, and on coins ; and the court-poet still retains the title of laureate as a memento of the laurel crown he formerly wore. In the middle ages, it was customary to place on the heads of young doctors a crown of laurel ; such persons, as well as the poets who were sometimes solemnly crowned, as in the case of Petrarch at Rome in 1341, seem to have been called *baccalaurei*, from which word some etymologists derive the word "bachelor," when used as a literary title of honor.

The bay-tree is useful in medicine ; the leaves when bruised between the fingers exhale a pleasant odor, and afford when burnt a grateful incense. This aromatic property occasions the employment of the leaves for culinary purposes, and hence they are an article of export from the countries which afford the tree, being a branch of commerce even between Great Britain



Bay Tree.

and the United States. The husks of the berries contain a great quantity of volatile oil, which is very aromatic; and the kernels also furnish by expression a fat oil, which is much employed for embrocations. It is greenish in color, and the smell is a faint exhibition of that of bay-leaves.

CHINA AND THE CHINESE.



EVERYTHING relating to a nation which has books written an age before the birth of Christ must, of necessity, be interesting. It has been the general opinion that the Chinese are illiterate, and more like animals than humans. This opinion no doubt had its origin in estimates made of the character of the "outsiders," a race only half Chinese, being a mongrel of the former and the Tartar. They subsist partly upon what they steal from sailors, and partly upon rats, mice, dogs, and rice. Their habitations are floating junks, out of which they seldom go, as they can not land upon the coast or enter any of the cities without paying a sort of entrance-fee or toll. They are great legerdemainists, and their keen knowledge, as well as the constant practice of the mysteries of sleight-of-hand, enables them to swindle unwary "barbarians" with perfect impunity. They are very expert counterfeiters, and deal largely in spurious silver coin. Until within a few months no other class of the people of China have been visible to foreign eyes: hence, as we suppose, the unfavorable opinion which prevails with regard to the intellectual capacities of the Celestials. The Chinese are, as a nation, highly educated—versed in the arts, and, so far as literature goes, exceedingly well advanced in mental culture. In mechanical ingenuity they excel all others. For industry they are unparalleled, for the whole empire is like a beehive.

Cheap literature flourishes apace among this strange people. Books are numerous

and constantly published, as in Europe. The greater a celestial's learning, the higher his rank in the esteem of his fellows. In politics the Chinese are as wide awake as we are. The people have as much to say with regard to public men and measures as the most democratic conclave of Americans, and the government is obliged, in all instances, to succumb to the popular will. One fault has retarded the desirable progress of the Chinese, and that is epicurean indolence. Everything in the way of social intercourse is managed on a dreamy system of ease. In their epistolatory conversation, the written salutation invariably is, "I wish you *tranquillity* and promotion." How a people who eat *soups* with chopsticks, can be tranquilly disposed, is a mystery.

The Chinese assert that their population is equal to three hundred and fifty millions. This will not seem at all unworthy of credence, when we reflect that China is as large as Europe, and that the water is inhabited (by means of the aforesaid junks) as densely as the land: there are thousands of the Chinese who are born, live, and die, on the water, and are quite worthy of the title of amphibii. A nation numbering so many souls *ought* to be powerful, but is not, simply because martial skill is not considered a necessary national accomplishment. If they were good warriors, they might not only defy the aggressions of foreign powers, but overrun and subdue the lands bordering on their own. Thus we see that the "Peace Society" would, if they could gain us over to the support of their doctrines, enervate us as a nation, and present us an easy prey to the ambitious designs of antagonistic governments.

The Chinese are brave; no men die more fearlessly on the field of battle: they are as impetuous as tigers, and as devoid of coolness and precision as a community of enraged cats. They are great newspaper readers, and newspapers circulate as freely in the principal cities as they do in Gotham. The "Pekia Gazette" is the principal newspaper, and penetrates to every part of the empire.

The names and emoluments of public officers are annually given in the "Red Book," a publication somewhat similar

to our "Blue Book," only ten times as large.

China, too, is a country which is abundant in its resources. She needs no foreign trade—her own territory produces everything that is requisite for their support. They trade with foreigners entirely against their wishes, and would avoid everything in the way of commerce with other nations if they could.

Another very remarkable fact connected with the customs of this curious nation is, that they have no beasts of burden. The country is so densely crowded, that they could not find pasturage. Besides, tenements are too numerous to admit of carriage-ways in the streets of cities. The streets are only narrow footpaths, scarcely adequate to the purposes of pedestrianism.

A great cause for Chinese congratulating Chinese is the fact that all the improvements in the arts upon which Europeans pride themselves, were known among the cultivators of "mild oolong" years before any other people had an inkling of them. Look at the sagacity of these people! They are ingenious to a fault: yet machinery, the use of which would throw thousands of that dense population out of employment, has never been put in operation. The government asserts that the adoption of the use of labor-saving machinery would create a revolution in the empire and overturn it. It is thought that the introduction of English and American manufactures will, at some future day, produce the same disastrous results.

It is somewhat singular that the Chinese are miserable musicians. Their instrumental music is a wretched noise made by the bamboo and a diminutive drum, and their vocal accomplishment consists of the emission of a few guttural whines, and a series of harsh cries, resembling, in some degree, the music of the North American Indians.

THE annual loss to Great Britain by shipwreck is 610 ships, 15,000 lives—2,000,000*l.* sterling!

Gas (the German of "ghost") was first used for giving light in 1805, in Manchester, England, for lighting cotton-mills.

THE MANIS.



UITE extraordinary is the appearance presented by the animals of this genus (*Manis*); as remarkable, in fact, as that of the armadillo tribe—being covered on every part, with the

exception of the belly, with exceedingly strong, large, and horny scales. These, when the animals roll themselves up, furnish a suit of armor by which they are defended much more effectually than even the armadillo is against the assaults of their enemies. This armor is a compensating circumstance in their structure, giving them the security which, from their want of teeth, their inability to grasp with their feet, and their perfectly harmless nature, they would otherwise want. The external covering, together with the unusual length of the body and tail, gives to these creatures an appearance so much resembling that of the lizard, that they have been called "scaly lizards." These animals have, however, no proper alliance with the lizard tribe; yet, on a general view of the animal kingdom, they may be admitted to be a link in the chain of beings, which connects the proper quadrupeds with the reptile class.

With the exception of their scaly covering, the animals of this genus have much resemblance to the ant-eaters in their structure and general habits. Like them, they live by thrusting their long tongue into the nests of ants and other insects, and then suddenly retracting it into their mouths and swallowing their prey. They are natives of India and the Indian isles. Our engraving represents the two species of the genus which are distinguished as long-tailed and short-tailed.

The long-tailed or four-toed manis (*manis tetradactyla*) is known in India by the name of the phatagen. It is of a very long and slender form. The head is small and the snout narrow. The whole body, except beneath, is covered with broad but sharp-pointed scales, which are striated, or divided by small channels like those



Long and Short Tailed Mania

of cockle-shells, throughout their whole length. The throat and belly are covered with hair. The tail is more than twice the length of the body, and tapers gradually to the tip. The legs are very short: each foot is furnished with four claws, of which those of the fore-feet are stronger than those of the hind. Both the tail and the legs are scaled in the same manner as the body. The color of this animal is of a uniform deep brown, with a cast of yellowish, and with a glossy polished surface. It grows to the average length of five feet, from the tip of the nose to the extremity of the tail.

The short-tailed or five-toed manis (*manis pentadactyla*) is generally called in India the pangolin; but in Bengal it is called, in the Sanscrit language, *vajracite*, or the thunderbolt-reptile, on account of the excessive hardness of its scales, which are said to be capable of even striking fire like a flint. This species differs from the former in being of a much thicker and shorter form. The tail in particular is very differently proportioned, not being so long as the body: it is very thick at the base, and thence tapering gradually, but terminating very obtusely. It has also five instead of four claws to each foot: of which those on the fore-feet are of great strength, excepting the exterior one, which is much smaller than the rest. This species is scaled in the same manner as the preceding, but the scales differ in shape, and are much larger and wider in proportion to the body and tail. In the larger specimens of this species of pangolin the scales are smooth; but in those that are smaller they are slightly striated about half way from the base. In some specimens a few bristles are found between the scales, but in others this is not observed. The parts without scales are covered with hair. The animal is of a very pale yellow-brown color, with a surface as glossy as in the preceding species.

It walks very slowly with its claws bent under its feet, and would be the prey of every ravenous beast, had it not the power of rolling itself up, and opposing to its adversary a formidable defence of erected scales. The natives despatch the animal with blows of a stick, sell the skin to Europeans, and eat the flesh.

THE LAST LOOK.



HERE are few in this world who have not lost some near and dear friend, linked to them either by the ties of blood, or by a pleasant companionship enshrined in their hearts, and hallowed

and held sacred by a true and disinterested affection. The insatiate tomb has robbed almost every one whom it has spared, of some being on whom his eye rested with pleasure, who softened for him the asperities of life's rough pathway, and into whose bosom he poured his own heart's rich treasures—feelings, confidence, and love. They have seen them droop and die gradually, perhaps. They have seen the rose fade, the flesh waste, the muscles relax, and the eye grow lustreless, or beam with that unnatural light which is sometimes born of disease, and only tells of its progress. They have watched in grief and tears the shiftings of fever—the slow sinking away of life, the hours of agony, the days of quiet and apparent convalescence, the hopeless relapse, and the final triumph of death. They have paced the room where the poor body lay shrouded for the grave, and where Death almost seemed visibly present, casting a shadow upon every wall and object, and gazed on the rigid form, the marble aspect, the soulless, unspeaking features. They have felt, too, that deep oppression and heart-sickness which comes over every one upon such an occasion, where the grim tyrant seems to be watching and gloating over his victim, and the riot of decay is already beginning to be seen. All this has lacerated and crushed their hearts; but perhaps the bitterest pang of all came with the last look into the grave, when the coffin had been lowered, the loved object consigned to its long, dreamless rest, and the busy spade of the sexton was throwing back the senseless earth upon it, and hiding it for ever.

During sickness we have the object before us, wasted and sadly changed it may be, but still capable of communing with us, of appreciating our kindness, of return-

ing our love, and of throwing a few rays of sunlight over the cloud of our sorrow—faint, indeed, yet still enough to gild its gathering gloom. There is still the old smile running now and then over the features, and lighting them up with something of their former expression. The voice, too, though it is not what it once was, falls upon our ears, and we follow our friend with a sort of lingering hope, convinced of his doom, yet half looking for deliverance, down to the very banks of death's river. And even when that voice is hushed, and the last smile has faded, when the boat of doom has been launched, and the wreck of mortality lies before us, we somehow take a melancholy pleasure in gazing at the expressionless features, and linger in blind devotion at the shrine, though the deity which hallowed it has departed!

But when we gaze into the closing grave, we feel that our friend has indeed gone and hidden from us for ever. He has made his final exit from the stage of life, the curtain has fallen, and we shall see him no more, till we ourselves pass behind the scenes.

We know that we can listen to his voice no more breathing eloquence in public, or cheerfulness in the daily intercourse of life. We can never gaze into his eyes again, flashing with genius, beaming with kindness, or shedding tears for human suffering. We shall meet him no more in the busy crowd, or at the quiet fireside. The grave has received him to its remorseless embrace, and his sensible presence is lost to us for ever.

All these thoughts rush upon the mind at that moment and sweep over the heart in a tempest of wild and bitter agony. The brightness of the past but renders the present more dark, the future more gloomy. The pinions of hope, though unbroken, are wet and heavy with tears, and scarcely bear the heart above the grave into which it looks, and where its idol lies. Oh! the last look into the graves of kindred, on the cherished companions of life, would indeed scarcely be endurable, did not revelation assure us of a resurrection, and whisper to our hearts the sweet promise of immortality. God help the man who, at such an hour, has no faith in that prom-

ise, and believes all which was his friend is thenceforth nothing but dust! Infidelity shrinks away from the grave, offering no consolation to the believers of her barren creed, and nothing but Christianity can throw any light upon the burial-hour, and the resting-place of the dead.

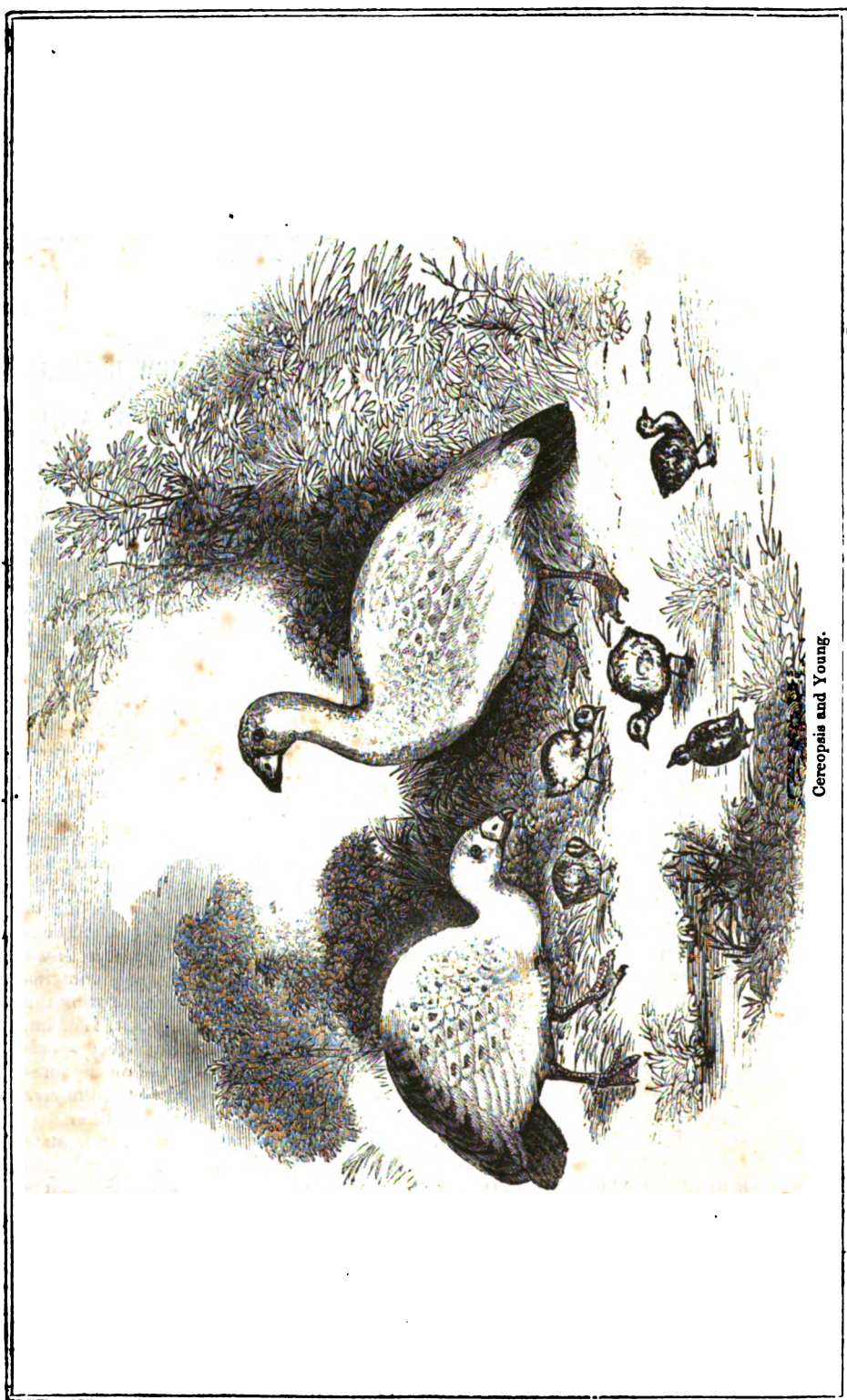
THE CEREOPSIS OF NEW HOLLAND.



EW HOLLAND is the native country of the *cereopsis*;—and although most voyagers who have visited the distant shores on which it abounds have alluded to it as a species of swan or

goose, it is only within the last few years that naturalists have gained an accurate knowledge of its true character and its natural affinities. The first introduction of the *cereopsis* into the records of science was by the venerable ornithologist Dr. Latham, in the year 1802. He published at that time a figure and description of the bird in question in the second supplement to his "General Synopsis," regarding it as the type of a new genus among the *waders*, and to this genus he gave the title of *cereopsis*—the specific designation of the bird, of which indeed he had seen only one example, being *Cereopsis Nova Hollandie*. The term *cereopsis* contains an allusion to the large *cere* covering the base of the bill, but which Dr. Latham, misled by an apparently imperfect specimen, supposed to be extended on the forehead and face: as it is, however, the *cere* is so extensive as to justify the title.

The habits of the *cereopsis*, in a state of nature, have been succinctly detailed by various voyagers. Most probably it is migratory, at least to a certain extent; for Captain Flinders found it more abundant on Goose island in some seasons than in others. It frequents grassy districts and the shore, but rarely takes to the water, its food being exclusively grass. Both at Lucky bay and Goose island these birds were very abundant, and so tame that the



Cereopsis and Young.

crew of Captain Flinders had no difficulty in knocking them down with sticks, or even in taking them alive. M. Bailly reports to the same effect respecting those seen by him at Preservation island; and Labillardière says that at first they were so little alarmed by the presence of man, as to suffer themselves to be taken by the hand; but in a short time they became aware of their danger, and took to flight on the approach of any one. All agree as to the delicacy of its flesh. From the ease with which the *cereopsis* becomes domesticated, we are not without hope of seeing this bird added to the list of those which enliven our farmyards, and contribute to the luxuries of our table.

Though rightly separated as a distinct genus from that of the common goose, the *cereopsis* belongs to the great family of *Anatide*, or swimming birds: in the comparative length, however, of the legs—which are naked for a short space above the knee, and in the imperfection of the webs between the toes—it departs in some degree from the more typical of the family. It exhibits, in fact, the characters that are peculiar to the goose, and which separate them from the duck, carried out to a still further extent. The goose is organized less expressly for water than the duck, or some others of the *Anatide*, and the *cereopsis* still less; consequently the beak is shorter, the legs longer, and the feet less webbed. Its food is entirely vegetable: a short stout bill is requisite for plucking it up from the ground. In size this beautiful species equals the common goose; but its bill, as we have said, is shorter, being very thick at the base, and somewhat arched above. The top of the head is pale gray: the rest of the plumage is slate gray, each feather on the back and shoulders being margined with a paler tint, while the greater coverts and the secondary quill-feathers have a round dusky spot near the extremity; the quills and tail-feathers dusky black; tip of the bill black; cere yellow; tarsi orange-yellow; toes and webs black.

The markings of the young, while yet covered with down, are very singular: the ground color is white, but a stripe of grayish-brown passes along the top of the head and back of the neck; and a dash of the

same color extends from the base of the bill over the cheeks, encircles the eye, and nearly joins the stripe down the neck—which, having attained to the back, spreads and divides into three broad ribands, one of which passes down the centre of the back, while one passes along each side, and occupies the undeveloped wings; the chest and under surface are clouded with brown. When in charge of their young the adults are very pugnacious, driving other birds to a distance with great spirit.

AUSCULTATION.*



FROM the earliest period, physicians have known that disease in the cavity of the chest might occasionally be detected by the ear; but it was not until about seventy years ago that any express rules were laid down upon this subject. The merit of being the first methodical auscultator is due to Dr. AVENBRUGGER, a physician of Vienna, who published a short treatise on this subject in the year 1761. It is written in Latin, and is entitled "A New Discovery of the Art of Detecting Diseases in the Interior of the Chest by Percussion." When the chest of the patient is struck by the fingers of the physician, if it is healthy, it gives a sound, says Dr. Avenbrugger, like that of a drum covered with cloth; whereas, if it is diseased, the sound produced is as if solid flesh had been struck.

In performing this examination, the chest of the patient must be covered with his shirt, or else the fingers of the physician with a glove, which must not be made of glossy leather; for if the bare chest is struck with the bare hand, the concussion of smooth surfaces produces an external sound which obscures the internal one. The following eight general

* This word signifies listening; but, in medicine, means the art of distinguishing diseases by the sense of hearing.

rules are clear, correct, and well expressed :—

1. The duller the sound is over the chest, and the nearer it approaches the sound of solid flesh, the greater is the disease.

2. The larger the space over which this dulness extends, the greater is the disease.

3. It is worse for the left side to be affected than the right.

4. It is less dangerous that the front and upper part of the chest (viz., from the collar-bone to the fourth rib) should be destitute of sound than the lower part.

5. It is more dangerous that the sound be absent in the posterior part of the thorax than in the front and upper part.

[This rule is evidently the same as the last, in different words.]

6. If one side of the chest is entirely destitute of sound, it is a fatal sign.

7. If the sternum (viz., the front and central part of the chest) is without sound, it is a fatal sign.

8. If the place which the heart occupies gives the sound of solid flesh over a great space, it is a fatal sign.

The reason of the last rule is this : the heart from its solidity, produces a loss of resonance over the space which it occupies ; and, therefore, a great extension of this dulness shows a great enlargement of the heart—an incurable disease.

When there is a fluid in the chest there will be a loss of resonance : just as there is when the lungs, having lost their natural spongy texture, have become solid—a disease which Avenbrugger calls *schirrus* of the lungs ; but which is now termed *hepatization*, from *hepar*, the Greek word for liver. Percussion, however, will almost always succeed in determining whether the loss of sound is produced by the presence of a fluid or by hepatization ; for, in the former case, the patient, by altering his attitude, will change the position of the fluid, and thus transfer the dulness of sound from one spot to another ; but this ingenious method of discriminating the nature of the disease will, of course, fail in those rare cases in which one side of the chest is entirely filled with fluid.

But little advance seems to have been made from Avenbrugger to Laennec, the

distinguished inventor of the stethoscope.

This is a tube, usually made of wood, one end of which is applied to the chest of the patient, and the other to the ear of the physician. By this contrivance, the sound of the patient's respiration, as well as voice, is transmitted in the most distinct manner, and the minutest variations from the healthy standard can be distinguished by a practised ear. In children, for instance, the sound produced by respiration is louder and more acute than in adults ; but this acute breathing often occurs in grown-up persons, when, one lung being diseased, the other is forced to work for both. It is known among stethoscopists by the name of *puerile* respiration. Or, let us suppose a patient in an advanced stage of consumption, in whose lungs cavities have been formed by the suppurating of tubercles ; if the stethoscope be applied to the chest of such a patient when he is speaking, his voice will be heard echoing from the cavities in his lungs : this morbid resonance is called *pectoriloquy*. Such are a few of the more interesting points depending on auscultation, a subject on which large volumes not only might be, but have been, written. In comparing the methods of Avenbrugger and Laennec, we must acknowledge that, if percussion is more simple, the stethoscope affords more information ; but then this advantage is perhaps counterbalanced by the extreme difficulty of its application—a difficulty so great as not always to be surmounted by years of study. It is for this cause that we have touched but slightly on the use of the stethoscope, or chest-viewer, as we thought it needless to perplex general readers with refined distinctions which harass the scientific, and even left Laennec himself sometimes at fault.

We touch upon subjects of this nature principally to show by what slow steps the knowledge of diseases has advanced,—what slight symptoms indicate healthy or deranged functions—how delicate are the tests which they present, even to the most practised physician—and how contemptible, therefore, are those pretensions which would make the medical science consist in a few empirical rules, applied with little observation and less philosophy.

THE USES OF THINGS.



UCH error and misunderstanding of things has been produced in this world of ours, from the extremely limited and imperfect sense in

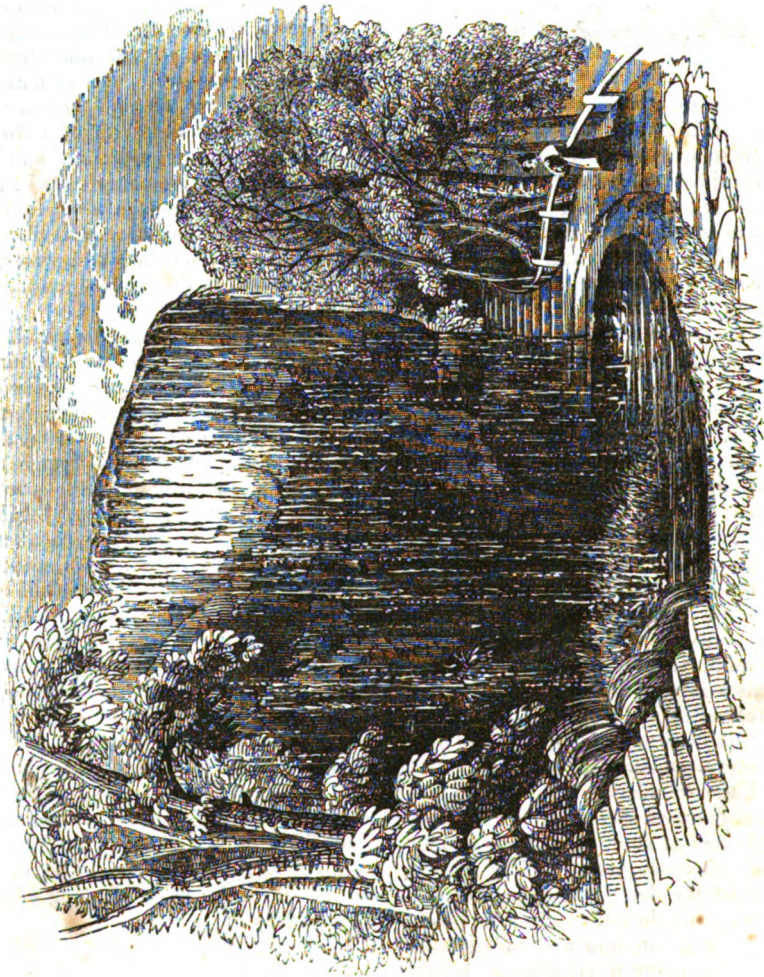
which the word *use* has come to be employed. It is a common error to apply this expression to those things only which are of manifest and immediate advantage—to those whose effects upon us are visible and material, and can be estimated in the scale of mercenary gain. Hence utility has come to be associated with the idea of narrowness and illiberality. The man who meets every object, custom, and amenity of life, with the ever-recurring question, "What is the use?" and accepts or condemns it according as he is able to give an answer, is regarded, and justly, of an illiberal and contracted mind. Such a man is perpetually on the rack to discover what is beyond his power to discern; he is haunted by a phantom which for ever eludes his pursuit. He is unable to surrender himself to an object or enjoyment, simply for its own sake, and thus mars his own happiness, by a constant and ever-restless anxiety.

All this arises, as we have said, from a misapprehension of wherein utility consists. It is from making money, which is the universal standard of all value with mankind, the standard of utility. So that nothing is deemed useful, but what either directly brings or may become the pander of this all-potent requisite. Now a great part, and by far the greatest part of the blessings of life, do not admit of this estimate; they are too fine and inestimable to be weighed in the gross scale of dollars and cents. Such are poetry, music, the pleasures of taste, and the principle of beauty in general. We have known persons who could not discover the use of a rose, or a beautiful landscape, or the gorgeously-woven hues of sunset. To such persons they are truly without any use. They lack the sense to discern and appreciate it. But is any one of all the lav-

ish gifts and creations of nature entirely without use? Alas! no. Nothing which comes from her liberal hand is created in vain. The humblest flower that blends its fragrance with the breath of morning, as well as the sun-braided rainbow that connects earth with heaven, has a use and most emphatic meaning to him who opens his heart to receive it. How ought the exuberance, the unstinted liberality, the varied and surpassing beauty of nature, to correct the narrow and self-formed views which some men entertain of utility!—These are useful in a higher and finer sense than is theirs to comprehend: nothing, it may be affirmed, is altogether useless, which tends to refine and liberalize the human mind—to make men wiser, better, less selfish in their ends, and more in sympathy with others.

There are some things of which it is improper, and a perversion of nature, to affirm that they have any use: which exists in, and for themselves, and are to be pursued for their own sake. It would be a strange misapplication of language to inquire what is the use of truth, or virtue, or, as we conceive, of beauty. That is a poor and false philosophy which attempts to found all beauty on the basis of utility. It degrades this divine and exalted principle from its true sphere, where God has placed it, to the low level of adventitious circumstance. It is perverting that which claims only love and admiration, to be the ignoble pander of profit and advantage. That is the highest perfection where beauty and utility are found united, but the one is no more dependent on the other than the principles of geometry are dependent on artificial lines and angles. The one is the highborn and eternal child of reason, the other the base offspring of want and necessity.

HUMANITY.—True humanity consists not in a squeamish ear; it consists not in starting or shrinking at tales of misery, but in a disposition of heart to relieve it. True humanity appertains rather to the mind than to the nerves, and prompts men to use real and active measures to execute the actions which it suggests.



Dropping-Well at Knaresborough.

THE DROPPING-WELL AT KNARESBOROUGH.



KNARESBOROUGH, an ancient town in Yorkshire, England, though not of large extent, is situated in an interesting part of the country, and has some interesting historical and tradition-

al associations connected with it. The town itself is not particularly remarkable; it is a parliamentary borough, and the manufacture of linen is carried on in it to a considerable extent. The Nidd runs close past it—a stream of minor importance generally, but which, in its short course from the high moorlands till it joins the Ouse, flows through some delightful scenery. On one side of the river (the side on which the town lies) are the ruins of Knaresborough castle. Opposite is the famous Dropping-Well, and in the cliffs, or steep banks, are caves or excavations made in ancient and modern times, but alike in the circumstance of having been formed by persevering but misapplied industry. One excavation bears the name of St. Robert's Cave (St. Robert was a famous ascetic of the thirteenth century, whose chapel and hermitage are also shown here), but which is rendered more remarkable as having been the scene of the murder committed by the schoolmaster Eugene Aram, whose memory has been embalmed in a novel. Other excavations were formed by an industrious weaver and his son, who also cut the cliff into terraces, rising one above another, and planted them with flowering shrubs and evergreens.

The walk along the river to the Dropping-Well is delightful. The spring rises at the foot of a limestone rock, at some little distance from the rock, where it spreads and trickles over, falling in a number of little streams, with a kind of tinkling sound. Dr. Short's description of the well, written in 1734, seems to be the progenitor of subsequent accounts. He says: "The most noted of the petrifying waters in Yorkshire is the Dropping-Well at Knaresborough, which rises up about fourteen yards below the top of a

small mountain of marlestone (properly a limestone of a very coarse grain), on the west side of the town and river, and about twenty-six yards from the bank of the Nidd; then it falls down in the same contracted rapid stream about a yard, and at a second fall at two yards' distance it comes two feet lower, then three or four, and so falls upon an easy ascent, divides and spreads itself upon the top of an isthmus of a petrified rock generated out of the water, and there falls down round it: about four or five yards from the river, the top of this isthmus or rock hangs over its bottom four yards."

The petrifying property of the water of the Dropping-Well is owing to a gritty or sparry matter, which encrusts the objects it is deposited on. Mr. De la Beche says: "Springs are seldom or ever quite pure, owing to the solvent property of water, which, percolating through the earth, always becomes more or less charged with foreign matter. . . . Dr. Webster describes the hot springs of Furnas (in the volcanic district of St. Michael, Azores) as respectively varying in temperature from 73° to 207° Fahrenheit, and depositing large quantities of clay and siliceous matter, which envelop the grass, leaves, and other vegetable substances that fall within their reach. These they render more or less fossil. The vegetables may be observed in all stages of petrification."

MOTIVES.



HE knowledge that we are rational beings, and that as such we should ever well consider ere we determine to act, seems to have induced the general belief that action, or the omitting to act, is always preceded by some immediate impelling motive. Accordingly, the imputing of motives is one of the most common occurrences in life. No matter what the nature of the subject—be it great or small, important or non-important—straightway is

it believed to have had its origin in some motive. If a party give the right instead of the left side of the way, he is supposed to be actuated by some preconsideration ; if he address you as " Dear sir," instead of " My dear sir," there is no doubt about it ; if he subscribe himself " Yours obediently," instead of " Yours faithfully," it is equally certain ; if he omit to take wine with you, the whole affair is as clear as the light of day. Now, nothing can be more incorrect than this view—nothing more true than that on ordinary occasions we all act independently of any motive whatever. In going home from the city, for example, we perhaps invariably walk on one side of the way, although we may have no motive for doing so—not even that of convenience. Perhaps we are occasionally taciturn, and not disposed at all times to be conversible ; and yet it may be that for such silence we have not a single discoverable motive. Every or any thing else but motive may have an influence in producing the particular state or occurrence complained of or remarked on. Habit, peculiar temperament, accident, thoughtlessness, unavoidable circumstances, may each occasion its portion of the results usually attributed to this otherwise certainly important cause of men's actions ; but they are all overlooked in an account of the matter. One party will become exceedingly suspicious at the non-answering of a letter, another very angry at the omission to acknowledge a bow or other compliment. The correspondent in the one case had simply forgotten the letter of his friend—a great offence no doubt, but still not so important as that imputed—and the offending party in the other had omitted to return the bow or other compliment from mere inadvertence. Now, had anything but a motive been thought of, or rather had no motive been assigned, all would have been right. But no : we are, as we have observed, reasonable beings, and therefore must be supposed to act at all times with a view to results and consequences.

Motives are of course divisible into good and evil ; and a good motive, if imputed, can not well be productive of unpleasantness. The misfortune, however, is, that we are more prone to attribute the evil than the good. This unfortunate propen-

sity is occasionally productive of serious consequences. On the occasion of the non-answering of a letter requiring an answer, as on that of the non-return of a compliment, if a motive be imputed at all, it can not be a favorable one ; hence coolness, severance of friendship, quarrels. In that of simple taciturnity, we have all the evils resulting from a false conviction of pride, ill-feeling, desire of concealing some important circumstance, as influencing the party disposed to hold his peace. How much more good feeling would there be in the world, and how much more friendly communion among those inhabiting it, were it but possible to eradicate this erroneous practice !

One great reason why it should be eradicated is, that the evil or injustice remains not against the party improperly suspected, but reflects in an equal degree upon ourselves. It is a veritable principle in moral as in physical science that like begets like. Let us attribute improper motives and we shall find that the same will be attributed to us ; nay, we shall perhaps also discover that there was good reason for that which possibly arose from accident or inadvertence. On the other hand, let us impute those which are good ; and if there be one single spark of feeling or principle in the composition of the party to whom we attribute them, we shall find that he will reciprocate : and whether he have good feeling or not, that he will give us credit for having deserved a good opinion, or at any rate will not conclude that we merited the neglect which had been exhibited toward us. These principles are in daily operation. Apart from the subject of motive, which perhaps implies some circumstance with which we are individually connected, let us unjustly accuse an individual of a desire to act unfairly, and we shall discover that he repels the charge with indignation. Let us give him credit, equally unjustly, for a desire to do that which is honorable, and we perceive that he endeavors to deserve it : our feeling and passions seem so constituted, as reciprocally to act on their like when excited. Thus benevolence acts on benevolence, anger on anger, pride on pride, and self-esteem on self-esteem. Every one knows how the principle operates

with respect to the education of children ; and it is only to be regretted that it is not more generally regarded in riper life.

It may be true that to impute good motives at all times would be ridiculous. There are certain circumstances under which they can not be presumed to exist, and which of course are not included in these remarks. It may be also true that in imputing them, we sometimes throw our own conduct open to misconstruction. This can only be, however, when we act without due regard to a principle, and when we impute good motives at one period and bad at another, just according as our whim and caprice dictate. It can not happen where we make it the rule always to adopt the former course, until we are certain that we are wrong in doing so. In imputing a good motive, we may occasionally find that we have been mistaken : but the mistake will be on the better side ; and it will never occur that we have committed an injustice, or that we have unnecessarily or foolishly lost a friend.

SHAKING HANDS.



AMONG the first things which we remember taking notice of in the manners of the people, were two errors in the custom of shaking hands : some we observed grasped everybody's hand alike—with an equal fervor of grip ; you would have thought Jenkins was the best friend they had in the world ; but on succeeding to the squeeze, though a slight acquaintance, you found it equally flattering to yourself ; and on the appearance of somebody else (whose name, it turned out, the operator had forgotten), the crush was no less complimentary : the face was as earnest, and beaming the "glad to see you" as syllabical and sincere, and the shake as close, as long, and as rejoicing, as if the semi-unknown was a friend come home from the deserts.

On the other hand, there would be a gentleman, now and then, as coy of his hand as if he were a prude, or had a whitlow. It was in vain that your pretensions did not go beyond the "civil salute" of the ordinary shake, or that being introduced to him in a friendly manner, and expected to shake hands with the rest of the company, you could not in decency omit his. His fingers half coming out and half retreating, seemed to think you were doing them a mischief, and when you got hold of them, the whole of the shake was on your side ; the other hand did but proudly or pensively acquiesce—there was no knowing which ; you had to sustain it as you might a lady's, in handing her to a seat, and it was an equal perplexity to shake it or let it go. The one seemed a violence done to the patient, the other an awkward responsibility brought upon yourself. You did not know, all the evening, whether you were an object of dislike to the person—till on the party's breaking up, you saw him behave like an equally ill-used gentleman to all who practised the same unthinking civility.

Both of these errors, we think, might as well be avoided ; but of the two, we must say we prefer the former. If it does not look so much like particular sincerity, it looks more like general kindness ; and if these two virtues are to be separated (which they assuredly need not be, if considered without spleen), the world can better afford to dispense with an unpleasant truth than a gratuitous humanity. Besides, it is more difficult to make sure of the one than to practise the other, and kindness itself is the best of all truths. As long as we are sure of that, we are sure of something, and of something pleasant. It is always the best end, if not in every instance the most logical means.

This manual shyness is sometimes attributed to modesty, but never, we suspect, with justice, unless it be that sort of modesty whose fear of committing itself is grounded in pride. Want of address is a better reason, but this particular instance of it would be grounded in the same feeling. It always implies a habit of either pride or mistrust. We have met with two really kind men who evinced this soreness of hand. Neither of them, per-

haps, thought himself inferior to anybody about him, and both had good reason to think highly of themselves, but both had been sanguine men, contradicted in their early hopes. There was a plot to meet the hand of one of them with a fish-slice, in order to show him the disadvantage to which he had put his friends by that flat salutation; but the conspirator had not the courage to do it. Whether he heard of the intention we know not, but shortly afterward he took very kindly to a shake. The other was the only man of a warm set of politicians, who remained true to his first hopes of mankind. He was impatient at the change in his companion, and at the folly and inattention of the rest; but though his manner became cold, his constancy became warm, and this gave him a right to be as strange as he pleased.

MASSACRE OF THE MAMELUKES BY MOHAMMED ALI.



HE Mamelukes presented, formerly, one of the greatest obstacles to the consolidation of MOHAMMED ALI's rule in Egypt: he therefore resolved on a scheme for their destruction, which, although successful, was at once treacherous and ferocious. He invited those of the body who were living in the neighborhood of Cairo to be present at a grand festival to be given on the 1st of March, 1811, in honor of his son's being invested with the command of an expedition against Mecca. To this ceremony all the Mamelukes repaired; and when they were within the gates of the pacha's castle, which were closed on them, a shower of musketry was poured down upon them, from which they had no means of escaping. The engraving representing this scene is taken from Count Forbin's "*Voyage dans le Levant*." The following is the count's description of the scene:—

"That audacious militia, the Mamelukes, which, since the time of Malek

Shah, had made Egypt to feel their power, were nearly destroyed by Mohammed Ali. They had received orders to hold themselves in readiness to take part in a grand ceremony, which was to precede the departure of his son for Mecca. 'That day,' said an inhabitant of Cairo to me, 'the sun rose the color of blood!' The pacha looked dark and melancholy: but recollecting that he was to preside at one of the most brilliant fêtes of the mussulmans, he assumed a smile which contrasted remarkably with his general appearance. He had addressed the Mamelukes as the 'Elder Sons of the Prophet,' and called upon them, by the peace which subsisted between them, to celebrate with him the departure of his son for the Holy Tomb.

"In the meantime a number of faithful Albanians were concealed upon the ramparts, the towers, and behind the walls of the citadel. The Mamelukes arrived with the utmost confidence, and the gates were closed upon them. The pacha had placed himself on the summit of a terrace, seated on a carpet, smoking a magnificent *narguilé* (Persian pipe), whence he could see every motion without being seen; behind him were three of his confidential officers. He regarded the scene below with a fixed and terrible look, without speaking a word. The order was given to 'Fire' and the massacre of the Mamelukes commenced. They were adorned, or rather encumbered, with their finest arms, and mounted on noble horses; but their numbers, their courage, all were useless—they were destroyed!"

Such of the Mamelukes as escaped the indiscriminate massacre within the walls of the castle were seized, carried out, and beheaded; and numbers in the towns and villages, on the calamity which had befallen their brethren being made known, shared a like fate. The remnant retired to Dongola in Nubia; but they were scattered by Ibrahim Pacha: and from that period the total destruction, or at least the complete subjugation of the once proud Mamelukes, may be dated.

Mohammed Ali is a remarkable man. He came into Egypt about the year 1800, a mere soldier of fortune, and gradually raised himself until he was made pacha.



Mohammed Ali witnessing the Massacre of the Mamelukes.

JUGGLERS OF INDIA.



JUGGLERS came forward on one occasion to perform publicly in the yard of the barracks of Madras: many hundreds of people, of all kinds, ages, and denominations, including the soldiery of the establishment, assembled to witness the exhibition, and some little temporary arrangements were made that all might hear conveniently. The leader of the jugglers (who were all, of course, natives of Hindostan) requested the commanding officer to place a guard of men around the scene of display—a precaution which was adopted, and proved a very wise one. The floor of the court, he it observed, was composed of sand, firm and well-trodden. On this ground, then, after some preliminary tricks of an inferior kind, one man was left alone with a little girl, the latter seeming about eight or nine years old. Beside them stood a tall narrow basket, perhaps three or four feet high, by little more than a foot in width, and open at the top. No other object, living or inanimate, appeared upon the ground. After a short period spent by the man in conversing with the girl, he seemed to get angry, and began to rail loudly at her neglect of some wish of his; the child attempted to soothe him, but he continued to show an increased degree of irritation as he went on. By degrees he lashed himself into such apparent fury, that the foam actually stood upon his lips; and being naturally of an unprepossessing countenance, he looked to the white spectators at least as like an enraged demon as might be. Finally his wrath at the girl rose seemingly to an uncontrollable height, and he seized her and put her beneath the basket; or rather, turned the open mouth of the basket over her person. She was thus shut entirely up—the turned bottom of the basket closing her in above. Having thus disposed of the child, in spite of her screams and entreaties, the man drew his sword, which was as bright as the surface of a mirror, and he appeared as if about to wreak some further evil on the object of his ire. Af-

ter some moments, during which he talked to himself and to the enclosed girl, as if justifying his anger, he did actually at length plunge the sword down into the basket, and drew it out dripping with blood, or at least blood-red drops! The child screamed piteously from her prison, but in vain; for the man plunged the weapon again and again into the scene of her confinement. As he did so, the cries of the girl became faint by degrees, and in the end died away altogether. The deed of death was consummated.

So, at least, thought most of the horror-struck persons who witnessed this action. And well it was for the chief performer in it that he requested a guard to be placed; for it required all the exertions of this guard to prevent the aroused soldiery, who believed this to be no trick, but a diabolical butchery, from leaping into the arena and tearing the man to pieces. The excitable Irishmen among the number, in particular, ground their teeth against one another, and uttered language not very complimentary to the juggler. Even the officers, whose better education and experience made them less open to such feelings, grew pale with uneasiness. But observe the issue of all this.

When the man seemed to have carried his rage to the last extremity, warned perhaps by the looks of the soldiers that it would be as well to close the exhibition without delay, he raised his bloody sword for a moment before the eyes of the assemblage, and then struck the basket smartly with it. The basket tumbled over on a side; and on the spot which it had covered, in place of the expected corpse of the girl whose last groans had just been heard, there was seen—nothing! No vestige of dress, or any other thing to indicate that the girl had ever been there! The amazement of the spectators was unbounded; and it was if possible rendered more intense, when, after the lapse of a few seconds, the identical little girl came bounding from the side of the courtyard—from among the spectators' feet, it seemed—and clasped the juggler around the knees with every sign of affection, and without the slightest marks of having undergone any injury. We have said the astonishment of the assembly was immeasurable;

and it might really well be so, seeing that the feat was performed in the centre of a court, every point of the circumference of which was crowded with spectators, whose eyes were never off the performers for one instant. As to the notion of a subterranean passage, the nature of the ground put that out of the question; and, besides, that nothing of that kind existed, was made plain to all who chose to satisfy themselves on the subject, by looking at the scene of performances when they had closed. Every one was sure that the girl had been put below the basket, and that she did not get out of it in the natural way. But she did get out—and how? It is impossible to say, though there can be no doubt that it was accomplished by some skilful *magnœuvre*.

A somewhat similar feat is sometimes performed with animals. A juggler will place a lean dog below one of the baskets, and—*presto, pass!*—when he lifts it up, you will behold a litter of as fine pups as ever whipper-in could desire. But most people will probably think the tree-trick a more wonderful one than any of these. A juggler, in performing this, chooses either a small spot of earth, of the extent of two or three feet square, and in the open air, or he takes a large flower-pot and fills it with mould for his purpose. Either of the ways will do. Having this small plat of earth before him, and his spectators ranged around at a distance of two or three feet, the juggler shows to the company a *mango*-stone, or the stone found in the centre of the eastern fruit known by that name, which varies in size from that of an apple upward. This stone the juggler then plants in the earth, at the depth of several inches, and covers it up. Not many minutes elapse until the spectators behold a small green shoot arise from the spot. It increases visibly in height and size every moment, until it attains the altitude of a foot or so. It then begins to send off branches from the main stem; on the branches leaves begin to appear, bearing the natural hue of vegetation. Buds next present themselves; the whole affair, meanwhile, assuming the regular aspect, in every particular, of a miniature tree some four feet high. The buds are followed by blossoms, and finally the green

fruit of the mango meets the astonished eyes of all the spectators. “Look, but touch not,” is all this time the juggler’s word; and he himself also preserves the character of a looker-on. When the fruit has arrived at something like a fair growth for such a tree, the originator of this extraordinary vegetation plucks it and hands it to the spectators. This is the winding up of the charm. The assembled persons handle the fruit, and see nothing in it the slightest degree different from the ordinary produce of the mango, elaborated by the slow vegetation of months. Our informant on these points ate a portion of the fruit brought forth by this jugglery, and found it to taste exactly like the raw mango. The whole process now detailed usually occupies about a quarter of an hour, from the planting of the stone to the production of the fruit. Though he gives away the fruit, the performer does not part with the tree. This feat, which is perfectly familiar to all who have been in India, is certainly an extraordinary one, and affords the most effectual evidence of the power of deception to which the race of jugglers has attained.

The feat of sitting, without seeming support, in the air, is one of the few first-rate Indian tricks which have been performed in Europe; but even this is now held somewhat cheap, the mode of performing it being pretty clearly understood. The feat is performed in this way: In the centre of a ring of spectators, stands the juggler with an assistant. When all is ready for the performance, the assistant holds an ample cloak or awning over the juggler, which covers him completely for the time. In a few minutes this covering is removed, and the juggler is discovered seated cross-legged in the air—unsubstantial air—at the height of a foot or so from the ground. He is in the thin dress of his country, and on one of his arms, which is extended horizontally, in a bent form, and which, as well as the other, has a wide sleeve upon it, a fold of a cloak was negligently thrown; the remainder of the cloak hanging down to, and resting on, the ground. This slight contact of the elbow with the cloak is all that connects the man with terrestrial things. Otherwise, he is totally left in air; and how he

maintains himself there is inexplicable to appearance. But the cloak alluded to seems to be in careless contact with another cloak or portion of attire that rests on the ground further off. Now, it is to be believed that, at the point where the cloak touches the elbow, a spring of a powerful kind passes up the sleeve to the arm, and bends down under his body, placing him probably upon a hoop. The other end of the spring passes off, and finds its support under the second or further-off cloak. The spring, in all likelihood, can be folded up into divisions, so as to be easily concealed while the awning is thrown over the juggler at the close of the performance, and before he gives liberty to the spectators to examine the spot, which he usually does. This is the received explanation of the feat, but there is some difficulty still in understanding the nature of the weight or support which is placed beneath the cloak. This must evidently be of considerable power to sustain his frame; and how he gets it out of the way, is not easily seen. The feats are the result of surprising art, address, or contrivance—and for such the natives of India certainly far excel the whole world.

THE WALRUS.



HE walrus, or morse, in the general shape of the body and position and structure of the limbs, closely resembles the seal, between which group of animals and the *Herbivorous Cetacea*, namely, the manatee, dugong, &c., it seems to constitute an intervening form. Like the seal, the walrus is clothed with short stiff hair, and its body, of great circumference round the chest, gradually diminishes to the hinder paddles; its proportions, however, are more thick and clumsy. In size this animal equals the largest of the seal-tribe, often attaining to the length of twenty feet, and being ordinarily from twelve to sixteen, with a body superior to that of

the largest ox. But besides its huge bulk, the walrus is very remarkable for the construction of the skull, and the character of its dentition—points in which it differs from any of the larger seals, animals which, in other respects, it nearly resembles.

The head of the living walrus is round, and, instead of terminating in a snout, presents two swollen protuberances, forming a sort of tumid muzzle, divided by a longitudinal furrow, above which the nostrils open, as it were, midway between the lips and eyes. From these protuberances, covered with thick wiry bristles, depend two enormous tusks, which, in conjunction with the bright and sparkling eyes of the animal, give to the physiognomy an expression of ferocity which its disposition does not warrant. The round form of the head is not relieved by external ears; a small valvular orifice, as in most of the seals, being all that outwardly denotes the situation of these organs. It is on the peculiarities of the skull that the swollen appearance of the muzzle and the situation of the nostrils depend. The two tusks, which in situation and character are analogous to those of the elephant, are imbedded in enormous *alveoli*, occupying each side of the muzzle anteriorly, and rising above the level of the skull; so that the skull appears as if concealed behind two large mounds of bone, between which, and at some distance above the mouth, opens the nasal orifice. The tusks have open roots, as have those of the elephant; they are directed downward, curve gently back, and are compressed at the sides. They vary in length from eighteen inches to two feet, and are of a proportionate stoutness. The lower jaw, which is destitute both of incisor and canine teeth, is prolonged and compressed at its anterior angle in order to allow this part to pass between the huge tusks, and advance to the anterior margin of the upper jaw, in which (between the tusks) are two incisors, resembling the molars in form, and which, though implanted in the intermaxillary bone, have by many been regarded as molars. In young individuals there are also between these molar-like incisors two small and pointed teeth, which, however, are soon lost; and indeed so are the other



V. n. praeor.

incisors, for in aged skulls they are seldom or never to be found. The molars, four on each side above and below, are short and obliquely truncate cylinders. The tumid appearance of the muzzle, so remarkable in the living walrus, depends then, as is easily seen, upon the enormous development of the *alveoli*, for the reception of the roots of the tusks. In proportion to the size of the skull, these *alveoli* are larger than those of the elephant, and far more prominent; and the skull, instead of rising above them, falls back and sinks behind them.

The walrus is a native of the polar regions, and in many of its habits resembles the seals. It lives in troops, which visit the shore, or extensive fields of ice, as a sort of home, where they rest and where the females produce their young. In ascending steep icebergs, or the precipitous borders of an ice-bound sea, the walrus uses its tusks with great advantage, and secures itself from slipping by striking their points into the glassy surface, or by lodging them amid the irregularities, and in the fissures or pits of the craggy mass on which it takes its repose. They are also instruments by which the animal tears up the submarine vegetables on which it in a great measure subsists. Its favorite food is said to be the *fucus digitatus*, a coarse kind of sea-weed growing in great abundance in the latitudes which the animal frequents. To this, fish and other matters of a similar kind are most probably added. As weapons of defence, the tusks of the walrus are very effective; and it is said to use them to great advantage in defending itself from the attacks of the polar bear, next to man, its most formidable enemy. It would appear, indeed, that man has either thinned the numbers of the walrus, or driven the herds to localities seldom visited.

Formerly, the walruses used to assemble in almost incredible multitudes in the gulf of St. Lawrence, at the setting in of the spring, and take possession of the Magdalene islands, which they still visit, but in very inconsiderable numbers. As the shores of these islands have a gentle slope, with but few precipitous rocks, they are very accessible; and here the animals are said to remain for many days without

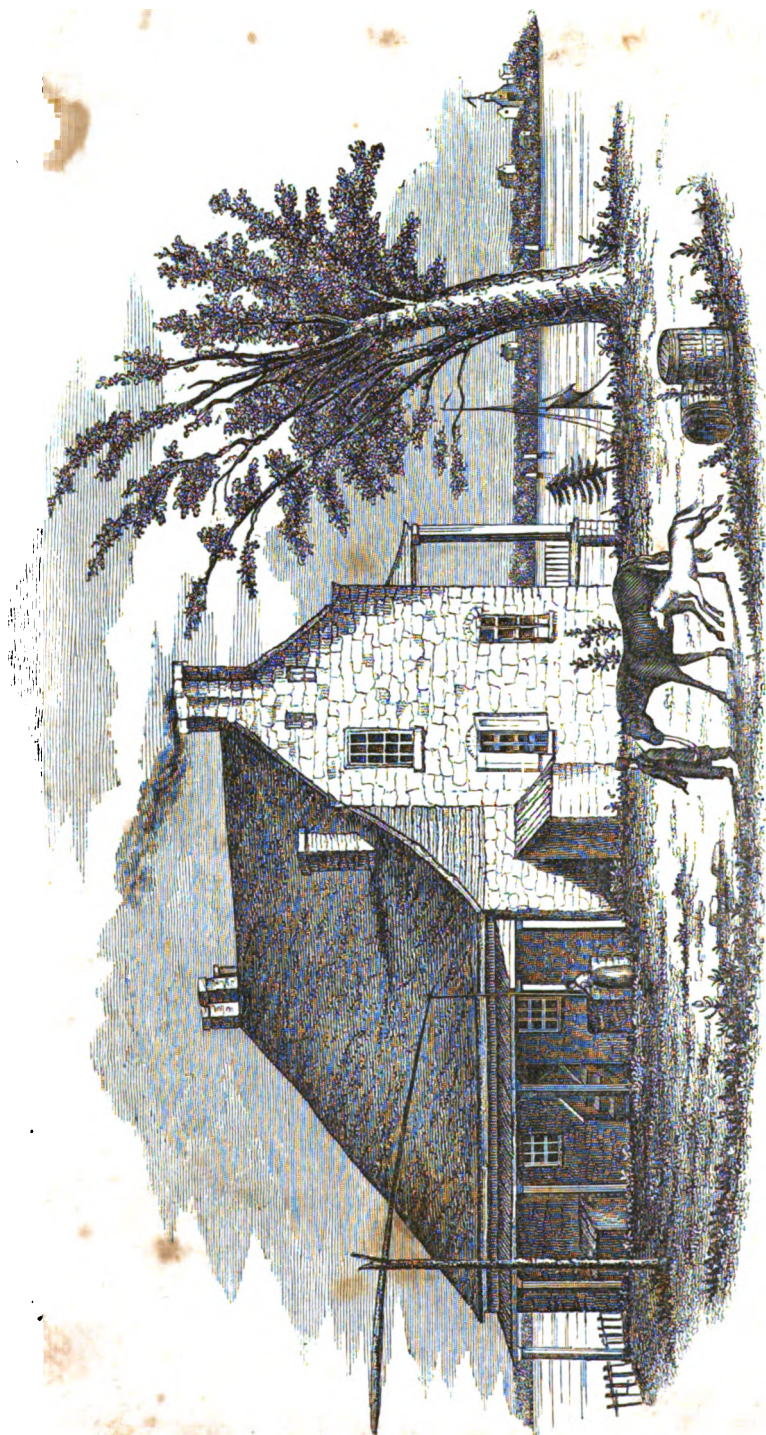
food, as long as the weather is fine, but to hasten to sea on the slightest appearance of rain. The traffic in the oil and skin of the walrus have both tended to thin their numbers, and to drive the remnant to other places of refuge. The fishermen are accustomed to kill them, during the darkness of the night, by torchlight, by the glare of which the creatures are bewildered, and fall an easy prey.

ORIGIN OF AMERICAN ABORIGINES.



WHATEVER part of the world America may have been peopled from, the first and most important question is that of the TIME at which that event must have occurred. We find

in America more than one hundred languages, which, however similar in structure, differ entirely in their vocabulary or words. This difference must have originated either before or after America was inhabited. The first supposition implies that of America having been settled, not by a few distinct nations, which is very possible, but by more than one hundred distinct tribes, of different origin, and speaking entirely different languages. This supposition is inconsistent with the great similarity, in their physical type and the structure of their languages, between almost all the tribes which inhabited America when discovered by the Europeans. If the prodigious subdivision of languages took place in America, for producing such radical diversity we want the longest time that we are permitted to assume. We can not see any reason that should have prevented those who, after the dispersion of mankind, moved toward the east and northeast, from having reached the extremities of Asia and passed over to America within five hundred years after the flood. However small may have been the number of those first emigrants, an equal number of years would have been more than sufficient to occupy in their own way every part of America.



THE OLD BILLOP HOUSE,
At Borden, the west end of Staten Island, New-York.

upon one of the ... he was
served by some Americans, who had sta-
tioned themselves with a spy-glass in the

* Fitz Randolph was the correct name. He was
bold soldier, a celebrated patriot, and gallantly fell
one of the New Jersey battles.

THE OLD BILLOP HOUSE,

AT BENTLEY, STATEN ISLAND, NEW YORK.

BY G. F. DISOWAY.



N approaching New York from Philadelphia by the Amboy route, few objects are more striking to the traveller's eye, than a high, ancient-looking stone edifice, situated near the water, on the extreme west end of Staten Island. This is the "Old Billop House" at Bentley, of which we present a very correct sketch in our present number. Amid the general search for new designs, is it not strange that this beautiful spot has escaped the notice of the artist and historian until now? The place too has some interesting associations worthy of a record.

More than a century ago, a Capt. Billop of the British Navy, took out a patent for the land, embracing 921 acres, which was increased by a second to 1600. At the period of the American revolution, Bentley was owned by Christopher Billop, a gentleman of property, and a member of the house of assembly, who had always opposed the measures which led to a rupture with Great Britain. As soon as the war broke out, he became a partisan leader, and accepted the commission of colonel of the Staten Island militia. Lord Howe, with a large force, took possession of Staten Island on the 4th of July, 1776, and it was held by the British during the whole war; and hence it became the theatre of frequent predatory incursions from the Americans, many of whom had taken up their abode on the opposite shores of New Jersey. By most of these parties violence was committed, and in some instances blood was shed, and lives were lost. Col. Billop, at the time a warm party man and military leader, was closely watched, and it is said was twice taken from his own house, by armed bands from "the Jerseys," and thus made a prisoner. Amboy is in sight, and upon one of these occasions, he was observed by some Americans, who had stationed themselves with a spy-glass in the

church steeple of that town. As soon as they saw him enter his abode, they ran to their boats, rapidly crossed the river, and he was soon their captive.

The British now in possession of New York, had confined in irons several Americans who had been made prisoners; and to retaliate for this measure, Col. Billop was taken to Burlington jail. We have copied the mittimus, as a matter of curiosity, and the method of doing such things at that eventful period. Elisha Boudinot was then commissary of prisoners for New Jersey.

"To the keeper of the common jail for the county of Burlington, greeting:—

"You are hereby commanded to receive into your custody, the body of Col. Christopher Billop, prisoner-of-war, herewith delivered to you, and having put irons on his hands and feet, you are to chain him down to the floor in a close room, in the said jail, and there to retain him, giving him bread and water only for his food, until you receive further orders from me, or the commissary of prisoners for the state of New Jersey, for the time being. Given under my hand, at Elizabethtown, this 6th day of Nov., 1779.

"ELISHA BOUDINOT,

"Com. Pris., New Jersey."

The commissary at the same time regretted to Billop that necessity made such treatment necessary, "but retaliation is directed, and it will I most sincerely hope, be in your power to relieve yourself from the situation, by writing to New York to procure the relaxation of the sufferings of John Leshier, and Capt. Nathaniel Randal."*

At this period, Col. Simcoe of the famous "queen's rangers," had command of a post in Richmond, whence he made a sudden and rapid incursion into New Jersey with his dragoons, and during the fight, his horse was killed, and he himself stunned by the fall was captured by the American militia.

He also was taken to Burlington, and unexpectedly became the fellow-prisoner of Col. Billop. Simcoe severely complained to Governor Livingston of New

* Fitz Randolph was the correct name. He was a bold soldier, a celebrated patriot, and gallantly fell, in one of the New Jersey battles.

Jersey, of their treatment, and addressed General Washington, urging his and Billop's exchange, which was soon afterward effected. Several plans had been laid for the liberation of Simcoe; and the day before his exchange, forty friends of the British cause had reached the neighborhood of Burlington with horses to rescue him.

At the close of the war, Col. Billop with a number of British subjects, left the island for St. John, New Brunswick; and thus his estate at Bentley became confiscated. The old mansion is built of stone, its walls three feet thick, and bears the marks of former affluence and elegance. Like most buildings of the "olden time," it has its ghost and other romantic stories. "There," said the person who now occupies the house, as we entered one of the upper story front rooms, "that spot on the floor, we have never been able to wash out. It is supposed to be blood, and a murder is said to have been perpetrated here. This too is the ghost room, but I have never been disturbed by such visitors, and believe neither of these stories."

A person had visited an adjoining apartment last winter, searching for hidden treasure. He had been told by some mesmerist or fortune-teller of New York, that money was to be found concealed in one of the walls of this room, and absolutely picked with hammer and chisel a large opening, but finally gave over the search as hopeless. This strange credulity was here exhibited in the winter of 1844!

In the cellar of the building, there is a brick vault, 30 feet long, and about 13 wide, finely arched, and may have been used as a place of retreat, or the receptacle for valuable articles in cases of emergency.

As Billop was a well-known "tory," and a military character also, his house must have witnessed many an interview of such men as Lord Howe, General Kniphausen, Col. Simcoe, and other officers of rank in the British service, who had command at various period on the island. Immediately after the severe battle on Long Island, Lord Howe sent a communication to Congress then assembled in Philadelphia, soliciting that a com-

mittee from that body might meet him, to confer on the difficulties between the two nations. For this purpose, Benjamin Franklin, John Adams, and Edward Rutledge, were appointed. The interview took place in this house, and these noble, patriotic, American spirits, declined every proposition for peace, that would not acknowledge the independence of their beloved country! Lord Howe expressed his distress, that he would be obliged to take such severe measures against the Americans, whom he so much regarded. Dr. Franklin in replying, assured him that the Americans would endeavor to lessen as much as possible, the pain he might feel on their account, by taking the utmost care of themselves.

When the committee took leave of Lord Howe, he had them conveyed to Amboy in his own barge, and as they approached the wharf, Dr. Franklin began to jingle some gold and silver in his pockets. Upon their arrival, he offered a handful of the money to the sailors, but the commanding officer, not permitting them to receive it, he replaced it in his pocket. Afterward he explained his conduct to his associates, by observing, "As these people are under the impression that we have not a farthing of hard money in the country, I thought I would convince them of their mistake. I knew at the same time that I risked nothing by an offer, which their regulations and discipline would not permit them to accept."

There is a beautiful lawn before the house, extending quite down to the water's edge. The views from the mansion are extensive, and rich in natural beauties. Directly in front the eye rests on Amboy bay, the town itself beyond, and the Raritan river, which here expanding into the general body of waters, the whole soon flows onward to the mighty Atlantic.

Toward the south, at a more remote distance, are seen the mountains of Monmouth, and the most striking of all, the bold summits of Neversink, upon whose lofty highlands, the beacon-fires of 1776 blazed, to alarm the country upon the expected approach of the enemy.

What a blessing is PEACE! How changed the scene! Upon these very heights now glisten nightly the cheering

rays of the lighthouse, welcoming the traveller of every nation, to our land of freedom and happiness! Where once was heard the horrid din and clarion of war, here now the anvil rings, the merry wheel dances, and the carol of the peaceful ploughboy resounds, while he traces the enriching and silent furrow!

The excellent view of the "Old Billop House," which accompanies this description, was sketched by Alfred De Groot, a promising and native young artist of Staten Island. It is a faithful representation of this interesting and now venerable spot, and which it is the object of this article, to save from neglect and perhaps oblivion.

TRUTH.

"Think on whatever things are TRUE."

THE operation of the mind in regard to truth is twofold. The first is to acquire a knowledge of the truths, and to examine the evidence on which we are to receive them. In respect to those great truths which concern our relation to God, this leads us to a diligent study of the word of God, as well as of his works—and a care and diligence to examine what opinions we have formed on this supreme inquiry, and on what ground we have formed them; what are the objects of belief which we have received as true, and why we have done so. Having by such a careful exercise of the powers of attention and judgment, acquired a knowledge and a conviction of the truths, the next exercise of the mind is to make them subjects of thought, in such a manner that they may produce their proper influence on the moral condition. Now there may be much knowledge of truth, and careful study of evidence, while this great mental exercise is neglected; and the most important truths may thus be received as matters of cold and barren speculation, yielding no results, and exerting no influence over the character. It is against this mental condition that the exhortation of the apostle seems to be directed, calling upon us not only to know the truths, but to make them subjects of thought and reflection, so that they

may fix their influence on the moral economy of the mind.

Do we believe it to be the truth that we are every moment exposed to the inspection of a Being of infinite perfection and infinite purity, from whose all-seeing eye nothing can cover us, and to whom even the thoughts of the heart and the whole moral condition within are constantly open? If we make this solemn truth the subject of frequent and serious thought, what influence must it not produce upon the discipline of the heart, and the whole of our conduct in every relation of life. No man can put away from him the truth that a day is fast approaching when he must lie down in the grave; but it is also a truth, that another day will come with equal certainty, when, at the voice of the Eternal One, the graves shall yield up their dead, and those who have slept in death shall arise to judgment. Did we think of this truth with a seriousness in any degree adapted to its solemn interest, and make the reflection a frequent and habitual exercise of the mind, it could not fail to make us feel the value of the soul which is to live for ever; and to force upon us the habitual conviction, how trivial in importance are the highest concerns of time, and how big with momentous interests are the concerns of eternity.

THE AYE-AYE.



HIS extraordinary animal, respecting the true situation and affinities of which a great many conflicting opinions have been advanced, and upon which naturalists are still divided, is a native of Madagascar, where it is either extremely rare, or at least a tenant of remote solitudes seldom visited by the aborigines of the island, and never by Europeans. One specimen alone exists in Europe, brought home by Sonnerat, its discoverer, in 1781, which is carefully preserved in the Royal Museum of Paris. Sonnerat observes that



The Aye-Aye (*Cheiromys Madagascariensis*).

it seems allied to the lemurs, the monkeys, and the squirrels; and subsequent writers have taken opposite views, according as they have been biased by one part of its organization or another. Guided by its singular dentition, Pennant placed it among the squirrels, the former under the title of the aye-aye squirrel, the latter under that of *sciurus Madagascariensis*. Of its habits we know nothing but from the account of M. Sonnerat, who kept two of these animals, viz., a male and a female, alive in captivity. It would appear that their habits are nocturnal. By day they see with difficulty, and the eyes, which are of an ochre color, resemble those of an owl. Timid, quiet, and inoffensive, they pass the day in sleep, and are not aroused without difficulty; when awake, their motions are slow, as those of the lori, and they have the same fondness for warmth; their thick fur indeed sufficiently proves their impatience of cold, the more needful, as night (between the temperature of which and that of the day in intertropical countries there is a great difference) is the season of their activity. During the day the aye-aye slumbers in its secluded retreat, namely, some hole or cavity, in which it conceals itself, and from which on the approach of genial darkness it issues forth in quest of food; as the structure of its teeth indicate, its diet consists of buds, fruits, and other vegetable matters, to which may be added insects and their larvæ, for which it is said to search in the crevices and chinks of the bark of trees, dislodging them by means of its long claw-furnished fingers, and by the same means conveying them to its mouth. The individuals alluded to, which were kept alive by Sonnerat for about two months, were fed upon boiled rice, which they took up with their long slender fingers, using them much in the same manner as the Chinese use their eating-sticks. Sonnerat remarks, that during the whole of the time these animals lived, he never observed them set up their long bushy tail in the same manner as the squirrel does, but that, on the contrary, it was always kept trailing at length.

Of the number of young produced, nothing is known, but we may conclude that they amount at the most to not more than

two at a birth, and perhaps only one. The term *aye-aye* is the native name of this singular animal, and is said to be a resemblance of its voice, which is a feeble cry, consisting of two plaintive syllables.

Notwithstanding the length of time that has intervened from the discovery of the aye-aye by Sonnerat, to the present day, and visited as the island of Madagascar has been by Europeans, nay more, notwithstanding the residence of Europeans within its shores, it is somewhat strange that no additional information should have been collected respecting the habits and manners of this animal—that no additional specimens should have been obtained, and that not a single notice of a living individual having been seen or captured should have appeared in the records of science.

RECREATIONS IN NATURAL HISTORY.



THE following anecdotes have been collected together, from the belief that they are too wonderful to be lost. They illustrate principally the instinct of animals.

There can not be a doubt of their authenticity, for we assure our readers that they have appeared previously, with a few exceptions, in the country newspapers.

The turtle is naturally of a sluggish temperament, but when roused it has been known to do fearful things. Gunter, the great Swiss naturalist, tells an anecdote of one that is quite dramatic in its pathos. He had presented a very fine specimen of a turtle to the lord-mayor, who sent it to the London tavern to be taken care of. The day before the 9th of November, this turtle was allowed to walk up and down the pavement in front of the tavern; but to prevent people running over it, a label was hung round its neck, on which was written, "WILL BE KILLED TO-MORROW." This seemed to prey heavily upon the turtle's mind, for it waddled to and fro, evi-

dently in a very excited state, and a tear was seen distinctly to course down its left cheek, and bedew the surrounding flagstones. The poor creature rolled about with increasing uneasiness every minute, till the lord-mayor's state carriage happening to pass, it slipped off the pavement, and fell deliberately under the forewheels of the cumbrous vehicle. It was picked up a shapeless mass of hopeless callipash, and mutilated callippee. "There is no doubt," says Gunter, "that this was a premeditated act of suicide, for it was proved afterward that nothing but the immense weight of the lord-mayor's carriage could have crushed the shell. Grief at its impending fate evidently impelled the distracted turtle to the rash act."

Horses have been known to predict a frost by going to the blacksmith's the day before to be rough-shod. Franconi tells a story of a mare who would never perform on the stage unless she was on the side of the French. Her spirit of nationality was such, that if she was carrying an Englishman or an Austrian, she would invariably throw him and then run over to the side of the emperor. In this way she has often thrown Blucher and the Duke of Wellington. Napoleon hearing of this extraordinary trait of patriotism in a horse, went expressly to the *Cirque*, and having witnessed the fact with his own imperial eyes, offered Franconi a whole regiment of cavalry in exchange for the mare; but the French Ducrow, to his credit let it be said, would not part with her. Napoleon was piqued, but afterward decorated the mare with the grand cross of the legion of honor.

Pigs have been taught to spell. A singular anecdote is told of one, that indubitably proves the force of early habit in animals generally, but in a pig especially. A learned sow, that was called "Bacon," would always spell Vauxhall with a W. This was always a matter of wonderment, till it was ascertained that she had been born on a market day in Smithfield market. The inveterate misuse of the W at once confirmed her cockney origin.

Le Vaillant, the African traveller, tells some wonderful stories about the instinct of the baboon. He travelled with one for a long time as a guide. Its name was

Snees. He knew the shops where the best sherbet was to be got. Being short of butter once, Snees brought him a number of cocoa-nuts, which he had thrown about till the milk inside had become churned. He watched by his master's side every night, killing the mosquitoes and fleas which swarm about the banks of the Nile. He often helped Le Vaillant in unrolling the mummies, and packing up his trunks. Le Vaillant brought this baboon to Europe, and Snees showed his gratitude by saving his master's life. Thieves were plundering the house, when Snees ran to the alarm-bell, and never ceased pulling it till the inmates were alarmed; the thieves were apprehended just in time, for Le Vaillant says, when he awoke there were two gentlemen at his bedside, the one with a pistol, the other with a carving knife. The day Le Vaillant died, this sagacious baboon broke a blacking bottle—whether accidentally or not is not proved—which blacked him from head to foot; but many persons who knew Snees well, declare this was done purposely, from a desire of the faithful animal to show respect to the memory of his kind master, by going into mourning for him.

The instinct of bears is equally wonderful. There was one at the Zoological gardens, who would never mount the pole on a Sunday, because on that day no cakes are allowed to be sold.

A lady of title informed Buffon that she knew a blackbird who looked at the barometer every morning, and would not go out if it pointed to wet. An anecdote told by a German naturalist of a beaver, is no less wonderful than the above: he declares he saw a beaver weeping over the crown of an old hat. Soon another beaver approached it, and she cried more piteously than the first: then a number of young beavers, attracted by their sobs, came running up, and they all cried too. He accounts for this by saying, that the hat being made of beaver, the animals had evidently recognised in it the skin of one of their own kindred. "Who can say," he asks, "whether this very hat was not to them the sad remains of an affectionate son—the only remembrance of a favorite brother?"

Captain Parry tells a story of a polar bear, which puts the instinct of this animal beyond all doubt; he had given it to one of his sailors, who with this small capital, started showman, and having taught the bear to dance, used to take it about the streets. The sailor afterward assured Captain Parry that he never could get the bear to pass a barber's shop; he accounted for this by saying, that as "Bear's grease was sold only at those places, the animal was in a constant state of fear, lest it should be its fate to be sold in sixpenny pots."

The social grosbeak, a bird which is found about the cape of Good Hope, displays great ingenuity in building its nest, which is constructed as strongly as possible, so as to keep out the March rains. A Genevese traveller records the fact of finding a whole row of their nests, covered over at the roof with bits of an old mackintosh, which they had evidently picked up from one of the frequent wrecks off the coast. What but instinct could have told these sociable grosbeaks that mackintoshes were waterproof?

Many singular anecdotes are told of the instinct of the fox. The most probable of those we have read, is the one of the fox plundering a hen every morning of its eggs, and leaving a piece of chalk, of the same size as an egg, for every one he stole.

The following is amusing, for it proves that the parrot is not so stupid as he is generally represented. Jack Sheppard, when he had just escaped from Newgate, heard called out in a shrill voice, "Does your mother know you're out?" Jack was frightened at first, but recovered his usual courage, when he found it was only a parrot that was hanging over a green grocer's door.

The instinct of the dog, and the cat, and the rat, is so well-known, that one anecdote we think, will suffice to illustrate the three. A terrier and a tom-cat were pursuing a large rat down the street. The rat was almost caught, when it dodged suddenly and ran into a sausage shop. The cat and dog stopped convulsively at the door, and looking up at the yards of sausages, hung down their heads and slunk away quite terror-stricken. This

anecdote indubitably shows that self-preservation is the first law of nature, besides proving that the feeling of veneration for the dead is much stronger in animals than in men.

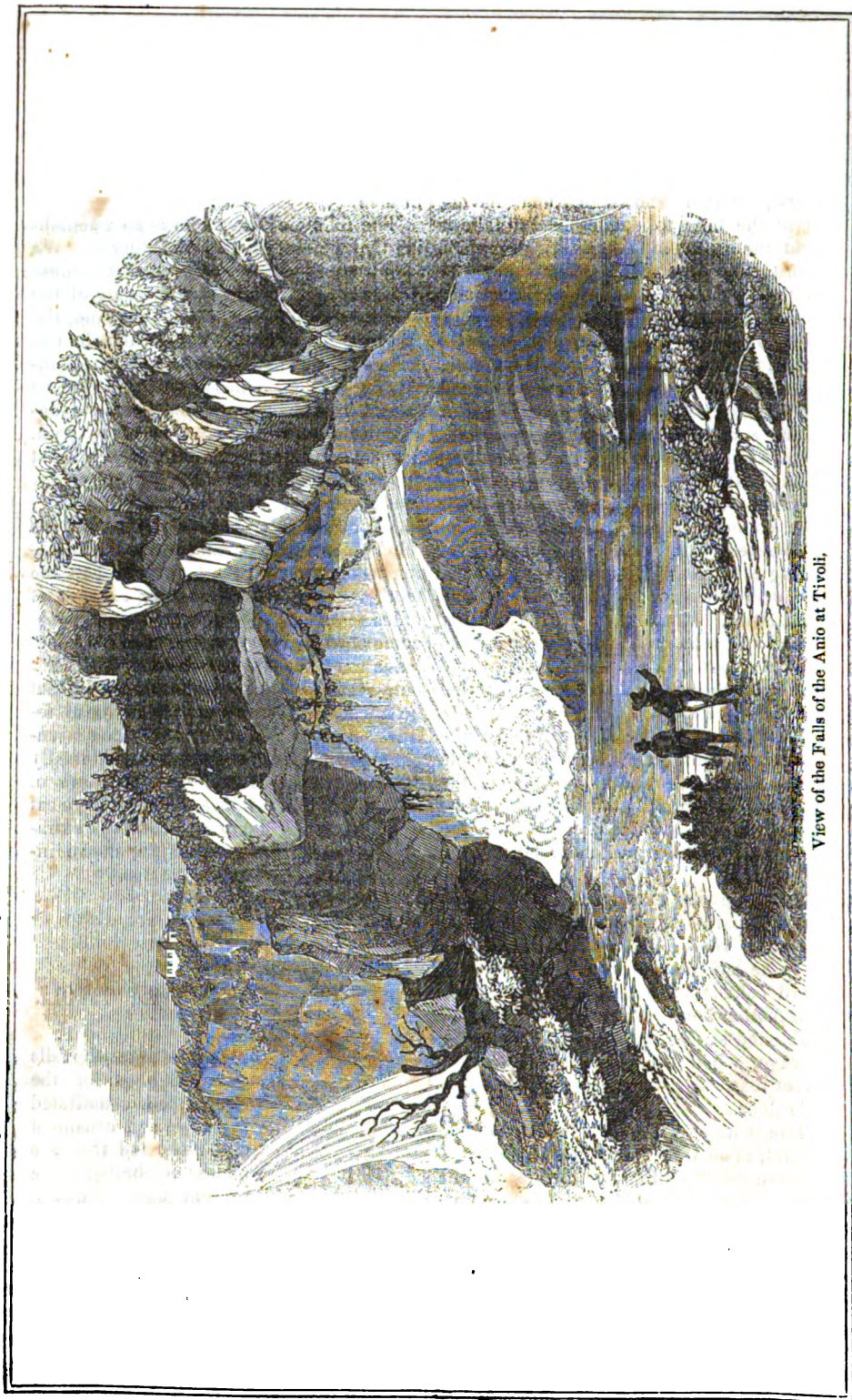
The following anecdote is so astonishing that we can not help repeating it. We should really doubt the truth of it, unless it was supported by the testimony of the celebrated Walker. Mr. Tiedemann, the famous Saxon dentist, had a valuable tortoise-shell cat that for days had done nothing but moan. Guessing the cause, he looked into its mouth, and seeing a decayed tooth, soon relieved it of its pain. The following morning there were at least ten cats outside his door—the day after that twenty; and they went on increasing at such a rate, that he was obliged to keep a bull-dog to drive them away. But nothing would help him. A cat who had the tooth-ache, would come any number of miles to submit its jaw to him. It would come down the chimney even, and not leave the room till he had taken its tooth out. It grew such a nuisance at last, that he never was free from one of these feline patients. However, being one morning very nervous, he broke accidentally the jaw of an old tabby. The news of this spread like wildfire. Not a single cat ever came to him afterward. It is extraordinary how the cats, in the above instance, acted like human beings!

GROTTO OF NEPTUNE AT TIVOLI.



IN ancient times, the falls and windings of the river Anio, constituted the pride and ornament of Tivoli, and they are no less celebrated at the present day. Eustace has described them in his "Classical Tour."

The modern name of the Anio is the Teverone. "This river," he says, "having meandered from its source through the vales of Sabina, glides gently through Tivoli, till coming to the brink of a rock



View of the Falls of the Anio at Tivoli.

it precipitates itself in one mass down the steep, and then, boiling for an instant in its narrow channel, rushes headlong through a chasm in the rock into the caverns below. The first fall may be seen from the window of the inn or from the temple; but it appears to the greatest advantage from the bridge thrown over the narrow channel a little below it. From this bridge also you may look down into the shattered well, and observe, far beneath, the writhings and agitation of the stream, struggling through its rocky prison. To view the second fall, or descent into the cavern, we went down through a garden, by a winding path, into the narrow dell, through which the river flows after the cascade; and placing ourselves in front of the cavern, beheld the Anio, in two immense sheets, tumbling through two different apertures, shaking the mountain in its fall, and filling all the cavities around with spray and uproar. Though the rock rises to the height of two hundred feet, in a narrow semicircular form, clothed on one side with shrubs and foliage, yet a sufficient light breaks upon the cavern to show its pendent rocks, agitated waters, and craggy borders. About a hundred paces from the grotto, a natural bridge, formed by the water working through the rock, enables the spectator to pass the river, and to take another view of the cascade, less distinct with regard to the cavern, but more enlarged, as it includes a greater portion of the super-incumbent rock in front, with the shagged banks on both sides. The rock immediately above and on the left is perpendicular, and crowned with houses, while from an aperture at its side, at a considerable height, gushes a rill, too small to add either by its sound or size, to the magnificence of the scenery. The bank on the opposite side is steep and shaggy, but leaves room for little gardens and vineyards. On its summit stands the celebrated temple commonly called of the Sibyl, though by many antiquaries supposed to belong to Vesta." The path which leads to the Grotto of Neptune is highly picturesque.

Tivoli is but 20 miles from Rome; and few leave that city without visiting a place possessed of such grand and striking scenery, and so rich in classical associations.

SERVITUDE.



It is a curious consideration, that at all times there should have been so large a proportion of mankind in the condition of servitude. This state is found in all but the rudest and most meager communities, such as that which overspread North America before its colonization; and even in these communities there is a form of service, in as far as the women are compelled by the men to do the hardest and meanest work. It seems to be natural in human society for a certain number, comparatively small in amount, to take the place of masters over the rest—or (to change the form, without changing the substance of the idea) for a certain large number to fall into the place of servants *under* the rest. The proportions of the numbers are different in different societies, and in different conditions of these societies, but never to so great an extent as to affect the proposition, that the great bulk of the people are in a dependent state. There are also differences in the character of service: an early form of it is attended by a complete surrender of personal freedom—in short, slavery; afterward, this is modified into the state of feudal service, where the person is not absolutely the property of the master, but only the will is at his command; finally, the relation of a servant to a master is improved into a simple legal bargain, by which certain duties are undertaken for wages or hire. Still, in all these characters there is one distinct feature, a power in the one party to order and direct, accompanied by a necessity in the other to concede and obey. And this arrangement has existed indifferently in connexion with all forms of government, despotical, republican, and mixed, as if it were a matter with which political arrangements had nothing to do, or as if the master part of the community were the only persons concerned in affairs of state. Even slavery, the worst form of service, has existed quietly for centuries under republican forms, as in

Greece and Rome; the masters, in these instances, manifesting all possible zeal against any encroachment on their political liberties, without ever once dreaming that their poor helots were human beings like themselves, who might be supposed to feel at least as much vexation at a total deprivation of their personal liberty, as their superiors experienced when some little interference was attempted with their elective rights, or a Pericles or a Cæsar began to enjoy a dangerous degree of influence in the areopagus or the senate.

An arrangement so universal as servitude, and so conspicuous at almost all times, and under almost all circumstances, may be presumed to be founded in nature. If not so, it is at least remarkably accommodated to nature; but the more rational supposition, is, that nature dictates the arrangement, and provides for it. A careful observer will, I think, be at no loss to see evidences of the truth of this proposition in common life. Individuals, who have long acted extremely well, and lived happily, as servants, or while employed and directed by others, are often found to do very differently when they become masters. A demand seems then to be made upon them for faculties which they do not possess. They appear to want powers of management, firmness, and energy, to play a *first part well*; they hesitate, get confused, and take wrong courses; or they are facile, and submit to be misled by unworthy counsel. Their utter failure in the objects they had in view, is the unavoidable consequence, and they sink once more into subordination, there to be again at ease, and happy. Nay, so nicely does nature work, that there is a class of minds which seem specially fitted to be *seconds* in command—having a charge over some, but subject to one other, of energy a degree superior. Such was Ajax to Achilles; such Murat to Napoleon. Generally, these lieutenants are possessed of some excellent qualities—unshrinking courage, unshakable fidelity, untiring zeal and devotion, but want the very highest powers of intellect, and therefore when, by fatal chance, made masters, go utterly wrong, and come to destruction—Murat himself an example. It is therefore to be presumed that they were designed by Provi-

dence only for the second place. While kept there, they are fulfilling their mission: let them aspire to a higher, and they at once go out of their proper sphere; their powers and duties are out of harmony; and they fail as a matter of course. Perhaps it would not be too much to say, that even third and fourth degrees of command are provided for in the many various mental constitutions which nature produces. Not that, in every case, these particular constitutions are fixed at one point throughout the whole of life. Many must advance from one point to another by the natural progress of the mind from its non-age to its maturity, or in consequence of educating and edifying circumstances. Upon this depends that system of promotion which exists in all liberal institutions, as well as private establishments. But it is nevertheless true that particular minds, in the particular conditions in which they are for the time, are specially adapted for such grades of command, and for no other.

It must here also be observed, that individuals who are at first in the condition of service, often emerge into that of mastership, and act as well in the one capacity as the other. This is no exception to the rule; it is only an additional illustration of it. Circumstances, not nature, were the cause of the original situation; but nature brought about the change. These individuals were fitted by their mental constitution for the higher function, and could not rest till they attained it. Fortune gave them their first place, not the second, though it is customary to speak of such changes as the work of the blind goddess. So also does it sometimes happen, that those born above service decline into it; and this in like manner, is generally the effect of natural character operating in despite of circumstances.

To dwell a little longer on the idea of a natural institution for producing this great social arrangement—it seems to depend more immediately and expressly on general force of character, than upon any special powers of intellect. Persons in subordinate situations often display great ingenuity and very considerable powers of thought; otherwise, indeed, they would not be fitted for the duties which they are expected to perform. But they are usu-

ally deficient in self-confidence and ambition; they are often timid, and disposed to rest satisfied with a moderate certainty, rather than undertake a risk for the sake of even the most tempting advantages. Their tastes and propensities have generally considerable power over them; and, these being gratified, they wish for nothing more. It seems to be mainly owing to such causes that the great bulk of mankind are content to give their entire services to those who can only afford them the necessities, and a few of the luxuries of life. What, on the other hand, prompts men to seek the master position, and do all they can to maintain themselves in it, seems to be mainly a general energy of nature, which knows not to submit, and will not rest with humble things. Self-esteem, the love of distinction, the desire of gain, and the feeling which delights to meet and overcome difficulties, appear to be main elements in this impulse; and all of these are not intellectual, but sentimental faculties. There may also be superior intellect in many cases; but what I would contend for is, that the impulsive part of our nature is probably what is most concerned in selecting the individuals who are to form the class of masters. On any such subject as this, it is well to ascertain, if possible, what is the declaration of nature herself. Those who look into physiology for explanations of our mental system, find that the larger volumed brains are those which usually rise to the higher places in society; and some curious proofs of this proposition have been adduced. It is sometimes the practice of hat-makers to have four sizes for *crowns*, the smallest of which is required for the hats of boys, the next for day-laborers and servants, while the largest size is required by the professional and upper classes. An extensive hat-maker in London has stated that the size of hats generally required there for the men who fulfil the duties of the humbler walks of life, are under seven inches in diameter at the part in contact with the head, while the hats required in other departments of society are generally above seven inches. This seems to show that the entire volume of the head, not that minor part alone which is supposed to be devoted to the intellectual

functions, is what produces the grades of society.

It may perhaps occur to some, that there is a disrespect toward a large portion of mankind, in considering them as placed by a natural institution in inferior positions. But this idea will vanish when the subject is viewed in a proper light. There is, in reality, nothing either flattering to one party, or derogatory from the other, in attributing peculiarities which are simply the gift of nature: the possession of a super-average brain is no more a boast than the being six feet high; neither is the having a small one more a discredit than the being only five feet six. Nature makes both for ends which are intended to be generally beneficial, and the one is as essential to the grand design as the other. Considering that in general service is the natural destiny for which a large portion of mankind seems fitted, it becomes the duty of all who are placed in that situation to rest satisfied with an endeavor to turn it to the best account in their power, and to be very careful to ascertain if they have a real vocation to a higher position, before venturing out of their original sphere. They may be fully assured that, if only formed for a subordinate function, and to live as dependents of some stronger minds which can take care of them, they will not be securing their happiness, but endangering it, by aspiring to become masters. It may be borne in mind by them, that, in the lowlier place, if less honored and distinguished, they are also saved from many evils which are hazarded and endured by their superiors. These, as occupying the front rank, have to bear the brunt of every battle. Loaded with grave affairs, and harassed by anxieties, they often spend far more wretched lives than the humblest of serfs. And how often do all their best-laid and most steadily-pursued schemes end in disappointment! Alas for man, and his many aims and doings, how little distinction is there to be seen, in many instances, at the last, between the life that has appeared most brilliant, and that which has seemed the most obscure! How often is the exalted seen to be foolishly puffed up, and the lowly most needlessly invidious! On the other hand, the advan-

tages enjoyed by those who serve need scarcely be enumerated, as they are so obvious—an almost certain supply of all the main requisites of life—duties which, being definite, occasion no feverish excitement or fret—exemption from all the taxing responsibilities which so much embitter the existence of their superiors. The results of the lives of both classes seem to come more nearly to an equality, than the fact of its being a point of ambition to rise from the one to the other would seem to indicate. We deceive ourselves, if we think this ambition an acknowledgment of there being a real superiority in the one state over the other. It is only the exponent of a kind of mind to which the lower state is unsuitable, and which desires to be engaged in circumstances and duties in harmony with itself.

If the relation of master and servant—superior and dependant—were correctly understood, an improvement to the happiness of both parties might be the consequence. It is simply an arrangement for a distribution of duties with a regard to the natural or acquired qualifications of individuals, and therefore does not necessarily imply any right on the one side to domineer, or a duty on the other to be over-obsequious. The commands and obediences which the relation implies, may very well consist with a degree of kindly regard on the master's part, and of respectful attachment on the servant's, which would tend to make the situation of both agreeable. There is one point in the conduct of the former to which too much attention can not be given—an avoidance of everything in language and in deed that can make a servant feel his situation to be one at all compromising his personal respectability or freedom.

Servants are often cooped up in a more or less solitary manner, without permission either to go abroad or to receive visits, and are expected in these circumstances to be perfectly happy, as well as cheerfully assiduous in the performance of their duties. It is an outrage on nature, and therefore nothing but evil can come of it. The social feelings of servants call for exercise, as well as those of their masters and mistresses, and a reasonable indulgence should be allowed to them.

LANDING OF JULIUS CÆSAR IN ENGLAND.



Ten o'clock on a morning in autumn (Halley the astronomer, has almost demonstrated, in a paper in the "Philosophical Transactions," that it must have been

on the 26th of August, B. C. 55), Cæsar reached the British coast, near Dover, at about the worst possible point to effect a landing in face of an enemy, and the Britons were not disposed to be friends. The submission they had offered through their ambassadors was intended only to prevent or retard invasion; and seeing it fail of either of these effects, on the return of their ambassadors with Comius, as Cæsar's envoy, they made that prince a prisoner, loaded him with chains, prepared for their defence as well as the shortness of time would permit; and when the Romans looked from their ships to the steep white cliffs above them, they saw them covered all over by the armed Britons. Finding that this was not a convenient landing-place, Cæsar resolved to lie by till the third hour after noon, in order, he says, to wait the arrival of the rest of his fleet. Some laggard vessels appear to have come up, but the eight transports, bearing the cavalry, were nowhere seen. Cæsar, however, favored by both wind and tide, proceeded at the appointed hour, and sailing about seven miles further along the coast, prepared to land his forces, on an open, flat shore, which presents itself between Walmer Castle and Sandwich. The Britons on the cliffs, perceiving his design, followed his motions, and sending their cavalry and war-chariots before, marched rapidly on with their main force to oppose his landing anywhere. Cæsar confesses that the opposition of the natives was a bold one, and that the difficulties he had to encounter were very great on many accounts; but superior skill and discipline, and the employment of some military engines on board the war-galleys, to which the British were unaccustomed,

Landing of Julius Caesar in England.



and which projected missiles of various kinds, at last triumphed over them, and he disembarked his two legions. We must not omit the act of the standard-bearer of the tenth legion, which has been thought deserving of particular commemoration by his general. While the Roman soldiers were hesitating to leave the ships, chiefly deterred, according to Cæsar's account, by the depth of the water, this officer, having first solemnly besought the gods that what he was about to do might prove fortunate for the legion, and then exclaiming with a loud voice, "Follow me, my fellow-soldiers, unless you will give up your eagle to the enemy! I, at least, will do my duty to the republic and to our general!" leaped into the sea as he spoke, and dashed with his ensign among the enemy's ranks. The men instantly followed their heroic leader; and the soldiers in the other ships, excited by the example, also crowded forward along with them. The two armies were for some time mixed in combat; but at length the Britons withdrew in disorder from the well-contested beach. As their cavalry, however, was not yet arrived, the Romans could not pursue them or advance into the island, which Cæsar says prevented his rendering the victory complete.

The native maritime tribes, thus defeated, sought the advantage of a hollow peace. They despatched ambassadors to Cæsar, offering hostages and an entire submission. They liberated Comius, and restored him to his employer, throwing the blame of the harsh treatment his envoy had met with upon the multitude or common people, and entreating Cæsar to excuse a fault which proceeded solely from the popular ignorance. The conqueror, after reproaching them for sending of their own accord ambassadors into Gaul to sue for peace, and then making war upon him *without any reason*, forgave them their offences, and ordered them to send in a certain number of hostages, as security for their good behavior in future. Some of these hostages were presented immediately, and the Britons promised to deliver the rest, who lived at a distance, in the course of a few days. The native forces then seemed entirely disbanded, and the several chiefs came to Cæsar's camp to offer allegiance,

and negotiate or intrigue for their own separate interests.

On the day that this peace was concluded, and not before, the unlucky transports with the Roman cavalry, were enabled to quit their port on the coast of Gaul. They stood across the channel with a gentle gale; but when they neared the British coast, and were even within view of Cæsar's camp, they were dispersed by a tempest, and were finally obliged to return to the port where they had been so long detained, and whence they had set out that morning. That very night, Cæsar says, it happened to be full moon, when the tides always rise highest, "a fact at that time wholly unknown to the Romans," and the galleys which he had with him, and which were hauled up on the beach, were filled with the rising waters, while his heavier transports, that lay at anchor in the roadstead, were either dashed to pieces, or rendered altogether unfit for sailing. This disaster spread a general consternation through the camp; for, as every legionary knew, there were no other vessels to carry back the troops, nor any materials with the army to repair the ships that were disabled; and as it had been from the beginning Cæsar's design not to winter in Britain, but in Gaul, he was wholly unprovided with corn and provisions to feed his troops. Suetonius says, that during the nine years Cæsar held the military command in Gaul, amid a most brilliant series of successes, he experienced only three signal disasters; and he counts the almost entire destruction of his fleet by a storm in Britain as one of the three.

Nor were the invaded people slow in perceiving the extent of Cæsar's calamity, and devising means to profit by it. They plainly saw he was in want of cavalry, provisions, and ships; a close inspection showed that his troops were not so numerous as they had fancied, and probably familiarized them in some measure to their warlike weapons and demeanor; and they confidently hoped, that by defeating this force, or surrounding and cutting off their retreat, and starving them, they should prevent all future invasions. The chiefs in the camp, having previously held secret consultations among themselves, retired,

by degrees, from the Romans, and began to draw the islanders together. Cæsar says, that though he was not fully apprized of their designs, he partly guessed them, and from their delay in sending in the hostages promised from a distance, and from other circumstances, and instantly took measures to provide for the worst. He set part of his army to repair his shattered fleet, using the materials of the vessels most injured to patch up the rest; and as the soldiers wrought with an indefatigability suiting the dangerous urgency of the case, he had soon a number of vessels fit for sea. He then sent to Gaul, for other materials wanting, and probably for some provisions also. Another portion of his troops he employed in foraging parties, to bring into the camp what corn they could collect in the adjacent country. This supply could not have been great, for the natives had everywhere gathered in their harvest, except in one field; and there, by lying in ambush, the Britons made a bold and bloody attack, which had well nigh proved fatal to the invaders. As one of the two legions that formed the expedition were cutting down the corn in that field, Cæsar, who was in his fortified camp, suddenly saw a great cloud of dust in that direction. He rushed to the spot with two cohorts, leaving orders for all the other soldiers of the legion to follow as soon as possible. His arrival was very opportune, for he found the legion which had been surprised in the cornfield, and which had suffered considerable loss, now surrounded and pressed on all sides by the cavalry and war-chariots of the British, who had been concealed by the neighboring woods. He succeeded in bringing off the engaged legion, with which he withdrew to his intrenched camp, declining a general engagement for the present. Heavy rains, that followed for some days, confined the Romans within their intrenchments. Meanwhile, the British force of horse and foot was increased from all sides, and they gradually drew round the intrenchments. Cæsar, anticipating their attack, marshalled his legions outside of the camp, and, at the proper moment, fell upon the islanders, who, he says, not being able to sustain the shock, were soon put to flight.

In this victory he attaches great importance to a body of thirty horse, which Comius, the Atrebatian, had brought over from Gaul. The Romans pursued the fugitives as far as their strength would permit; they slaughtered many of them, set fire to some houses and villages, and then returned again to the protection of their camp. On the same day the Britons again sued for peace, and Cæsar, being anxious to return to Gaul as quickly as possible, "because the equinox was approaching, and his ships were leaky," granted it to them on no harder condition than that of doubling the number of hostages they had promised after their first defeat. He did not even wait for the hostages, but a fair wind springing up, he set sail at midnight, and arrived safely in Gaul.

THE IRON AGE.



WE live in the iron age, as poets, from time immemorial, sung of the days in which they lived. Who has not heard that the age of chivalry is gone—that the spirit of poetry

has left this world—that the sordid vices of Mammon, restless and vigilant, have extinguished in our time the true constituents of happiness—faith, hope, and love.

There was much of poetical and moral beauty, and of philosophical truth, though darkly obscured, in many opinions and superstitions which, literally understood, were erroneous or idolatrous. In the degrading system of polytheism itself, the devotee dimly recognised the power and presence of the only and universal God, who by day and night, through the varied phenomena of nature, ever speaks with a still voice to the soul of the intelligent and pious worshipper. And thus in many an error and superstition of bygone ages there was originally a moral and a meaning which we have not always advantageously exchanged for the proud intelligence of

our own. But those who deem that poetry and romance have left us, proclaim only their own dulness. Nature is yet fresh in her beauty as she was centuries ago—the skies, rivers, forests, lakes, the blue ocean, the everlasting mountains, and the varying seasons are all to him “who has a soul attuned aright,” as glorious as ever. The hopes and buoyancy of youth—ever extinguished by advancing years and reproduced in the child—the calmer and more resolute passions of maturer age—“whatever stirs this mortal frame,” shall furnish the materials of romance and poetry so long as the world and the divine portions of our nature continue to exist.

We live in the iron age; but iron has accomplished for us results of which the poet or alchemist never dreamed. The native of our woods could only by a most wearisome process fell the tree which the iron axe so quickly prostrates—the instrument through which the ground, so recently covered with forests and tenanted by wild animal, has become dotted by the flocks and cities of a civilized nation, whose rapid peopling of an entire continent, familiar and common-place to us, shall be the theme of poetry and wonder to many a future age. Our weapons, more terrible than lightning, teach us the folly of war. One instrument of science shows us myriads of animated beings, susceptible of pleasure and pain in the drop of stagnant water, and covering in similar proportions nearly all matter, while another displays to our vision the mountains and oceans of heavenly orbs, and teaches us that far in the regions of infinite space are innumerable worlds, each it may be equalling our own, and like it, teeming in its atoms, with life incalculable. Machinery which to the Roman or Greek would have appeared impossible, propels the huge train of carriages on the iron road, and urges the iron boat against the power of wind and water, through the storms of mid-ocean, or the crashing and solemn icebergs, where the ordinary ship must inevitably perish.

A recent publication of high authority assures us that “writing paper *has been manufactured from iron*, and that books with both leaves and binding have been made from the same material.”

Manufacturing machinery performs the work of millions of men; and chymistry in a thousand methods produces changes more beneficial than the avaricious alchemist vainly toiled to discover. When the Macedonian conqueror Alexander wished to prove the truth of the Delphian oracle, knowing no better test, he asked to be told what his father then at a distance was doing. Our magnetic telegraph, claiming no supernatural agency, might accurately have answered—and by the same mysterious and subjugated power, the recent corpse itself, starting rudely as if indignant at the interruption of its last repose, may be roused into energy wild and life-like, but transient. The discoveries of science, and varied information of the arts and thoughts of other men and nations, are diffused through the medium of the iron press. We in our iron age have realized things more wonderful, than nursed amid the romance of wild Arabia,

“The wandering tribes require,
Stretched in the desert round the evening fire.”

It is true that the fairy tales and strange legends which our forefathers ceased to believe have now become almost extinct. The chivalry and glory, pomp and savage sports of feudalism have departed, but like a gaudy and imperfect picture, or the illuminated transparency of a theatre, the fascination of feeling which we experience when regarding them through distance or darkness, changes upon a closer view in the light of day to malignant dissatisfaction. Rather than admire the spirit of those times, which colored and gilt by time and imagination may sometimes appear poetically beautiful, as clouds of noxious vapor receive from the sun a brilliancy which is not their own, we should regret that in dark places of the earth are legends and stories as unreasonable as ever, and that ancient feudalism, tyrannical as it was, is surpassed by modern slavery.

A few only of the sublime and wonderful discoveries of our age have been mentioned. Volumes would not suffice to tell all. The riches of the past, most of its histories, experience, literature, and inventions—itsself no poorer for the legacy—the vast discoveries and powers of the present day—and the bright hope for the future, which, reasoning from that which

has already occurred, we dare not limit—
are all for us ; but in *serious humility* we
ask ourselves if the increase of happiness
and virtue is proportionate to the increase
of knowledge—whether as children of the
nineteenth century, heirs to its wealth and
power, we use our inheritance to the best
advantage.

NAUPLIA.



THE town of Nauplia, or Napoli di Romania, is situated along the foot of an abrupt rocky promontory of considerable elevation, which projects into the sea at the head of the gulf bearing the same name. It occupies the whole length of the narrow strip of low land between the cliffs and the shore, so that further enlargement is impracticable. It is well fortified, and enclosed by walls on which the "winged lion" is still visible, in proof of their Venetian construction, and though miserably bad, is, upon the whole, one of the best built towns in the Morea, of which it is justly considered to be the maritime key.

It is admirably situated, both in a military and commercial point of view ; but the place is very unhealthy, partly owing to the neighboring marshes in the plains of Argos, and partly owing to the total want of cleanliness. Fevers are very prevalent, and the town has often been ravaged by plague. In 1824 it was visited with a dreadful epidemic, which carried off about one third of the population. The interior, with the exception of one square, consists of very narrow, filthy streets, from which the breeze is always excluded by the upper stories of the houses projecting one above the other till they almost meet. The larger houses generally have been built by the Venetians, and are now made subservient to public purposes ; but the greater part are Turkish, though very different from the light well-built houses of Constantinople. In these the lower part is invariably appropriated as a stable for

the horses, whence a miserable and often unsafe staircase leads to the upper inhabited apartments. The shops are principally for the sale of wine, provisions, and arms.

At present Napoli is the seat of government and residence of King Otho, and may therefore be considered the capital of Greece ; but although it must ever be a place of great importance as a military and commercial post, it is by no means calculated to become the metropolis of the kingdom, from its unhealthiness and very circumscribed extent. The population may amount to 5,000 or 6,000, but fluctuates greatly ; it is, however, one of the most thickly-peopled cities in the world, averaging three or four inmates to each room. Since the arrival of King Otho, Nauplia has undergone considerable improvement ; and, as security of property becomes more certain, will doubtless make rapid advances, a great number of emigrants from Europe having already established themselves in trade here. The market of Napoli is well supplied with fruit and vegetables in great variety and abundance ; but butcher's meat is indifferent. The adjacent country is rich and fertile ; even the wildest and most uncultivated parts are covered with beds of thyme, fennel, and mint, which afford inexhaustible materials for honey ; but this indulgence must be gratified with caution, as the honey is medicinal in its properties.

The port is exceedingly good and eligible for shipping, being perfectly safe and easy of access. From the bay, the view is at once pleasing, picturesque, and exciting ; the lofty, majestic rock, surmounted by the citadel ; the busy town and port ; the plain and town of Argos, with its Acropolis, backed by a range of lofty mountains, and the snowy summits of Taygetus to the west ; all heightened by the associations of former times—contribute to render the surrounding scenery highly interesting. But as soon as the stranger puts his foot on shore, the enchantment ceases and his enthusiasm vanishes ; all feelings of pleasure give way to nausea and disgust.

Prior to the revolution, Napoli was the dépôt for all the produce of Greece ; and

although this exclusive trade has latterly been shared by other ports, there is still an extensive commerce carried on in wine, oil, corn, wax, honey, sponges, and cotton. The transport of these articles is principally limited to kaïks, or open boats of fifteen or thirty tons burden. Napoli offers no facility for ship-building; but, as some of the islands engage largely in this occupation, it may be expected that, as the mercantile navy increases, commerce will also emerge from the narrow bounds to which it has hitherto been confined. Already, indeed, it has begun to experience the encouraging effects of freedom, order, and peace. The sea-breeze blows furiously up the gulf of Nauplia during the day, and it is the custom, therefore, for vessels to leave the anchorage in the evening, when they catch the land-breeze, which blows during the night, and generally carries them out of the gulf before morning.

The strength of Napoli is the citadel, which is called the Palamedi, over whose turreted walls a few cypresses raise their sombre heads; it stands on the easternmost and highest elevation of the promontory, and completely overhangs and commands the town. To all appearance it is impregnable, and from its situation and aspect has been termed the "Gibraltar of Greece," an appellation which, when in a better state of defence, it may deserve. It is 720 feet above the sea, and has only one assailable point, where a narrow isthmus connects it with the main land—and this is overlooked by a rocky precipice: the ascent is by flights of steps cut in the rock. Beneath the Palamedi, the land continues at the elevation of about 300 feet to the extreme point of the promontory, and on this are various forts, &c. The present fortifications are chiefly Venetian, repaired at various times by the Turks and Greeks; but the ruins of ancient walls of Cyclopean masonry, on which those of the Palamedi are based, may still be seen. Many pieces of Venetian ordnance remain on the walls to this day. The Palamedi, in which some excellent barracks have lately been built, is capable of containing a large garrison. Besides these points, and the walls which enclose the town and are defended by bas-

tions, there is a small rocky islet in the harbor on which stands the castle of St. Theodore, which, though commanded by the upper forts, would be very formidable to an assailing squadron of ships. The Greeks, in the siege of Napoli, obtained possession of this post very early, and in spite of its disadvantageous position, contrived to annoy, not only the town, but the Turkish garrison in the upper forts; it is at present used as a state-prison. The town of Napoli is supplied with water by a stream issuing from the celebrated fountain of Canathus. It passes by an aqueduct under the cliffs of the Palamedi, and admits of being easily cut off by the besiegers, as it was by the Greeks.

The ancient Nauplia is said to have been built by Nauplius, the son of Neptune, before the Trojan war. Nauplia was subsequently the chief naval arsenal of the Argives. It was desolate in the time of Pausanias, who saw only the ruins of the walls and of a temple of Neptune remaining. The Venetians obtained possession of it in 1460. In 1495 it surrendered to Bajazet, but was again taken by the Venetians, under Morozini, in August, 1586, after a month's siege, and became the headquarters of that nation in the Morea. In 1714 it was treacherously given up to Ali Coumourgi, and was the seat of Turkish government and residence of the pacha of the Morea till Tripolizza was selected as being more central, when it became subject to the bey of Argos. The crescent remained uninterruptedly flying on this fortress till the 12th of December, 1822, when it surrendered to the Greeks, after a long and tedious blockade, the Turkish garrison having been reduced to such a state of starvation as to feed on the corpses of their companions. In 1825, Ibrahim Pacha made a fruitless attempt to surprise the place; and it has been the stronghold of the Greeks in their struggle for liberty. In April, 1826, the commission of government held their sittings here, but were obliged to retire to Ægina on account of civil dissensions, and two of the revolted chiefs being in possession of the Palamedi. During the presidency of Capo d'Istrias, who always resided (and was assassinated) in the town, it again became the seat of government; and on



Napoli di Roma.

the 31st of January, 1833, the prince of Bavaria arrived here as first king of restored Greece.

HUMOROUS PEOPLE.



PERSONS who are innocently good humored are very useful in this world, by diffusing a generous cheerfulness among all who approach them. Habitual vivacity has the recommendation of not

only its own pleasurable feelings, but it has a sanitary benefit; for it keeps the blood in proper circulation, quickens the understanding, and even helps digestion. Indeed it conduces to long life; while, on the other hand, the habit of yielding to and fostering sadness of heart, embitters and shortens the days of the young. It is well said by Solomon, that "a merry heart doeth good like a medicine; but a broken spirit drieth the bones." In later times, Bolingbroke gave it as his experience that, "in this farce of life, wise men pass their time in mirth, while fools only are serious," an observation that recalls to memory the lines of the poet—

"Sportsmen find woodcocks by their eyes,
As fools are known by looking wise."

If this be so, it is surely best to be cheerful, and, in the words of Byron,

"To laugh at all things, for we wish to know,
What, after all, are all things but a show?"

Sheridan Knowles, in his play of "William Tell," has happily described the blessings of a cheerful temper:—

"Who would not have an eye
To see the sun, where others see a cloud:
A frame so vernal, as, in spite of snow,
To think it genial summer all year round?
I do not know the fool would not be such
A man!"

Humorists would be much more in favor, could they only be taught what are and what are not the proper times and subjects for the exercise of their jocular-ity. Above all things, they ought to refrain from playing off their jests upon the reputations and manners of their friends. The little incidents of the passing hour,

and the lively fancies of the imagination, ought solely to supply the fun of the friendly circle. Natural imperfections and blemishes ought never to be selected as marks for ridicule to shoot its shafts at. It is well to "laugh at all things" that may be properly laughed at; but it is still more commendable to resist all temptations to raise a laugh by personal allusions which hurt the feelings of some one individual in the company. When this virtuous forbearance is strictly observed, a humorist's society becomes an enjoyment to all, for each feels sure that there is no danger of the flying shaft penetrating the sanctuary of friendly secrecy, or going beyond the bounds of good breeding. By sporting with another's weaknesses, infirmities, and personal singularities, we may certainly divert the company for a moment, and gratify our own selfish vanity, which is ambitious to show superiority; but, as Chesterfield justly observes, this is a pretty sure way to make enemies for ever, for "even those who laugh, will, upon reflection, fear and despise us: it is ill-natured, and a good heart desires rather to conceal than expose other people's weaknesses or misfortunes. If we have wit, we should use it to please, and not to hurt: we may shine, like the sun in the temperate zone, without scorching." Conversation may impart pleasantry and cheerfulness, without having even the slightest recourse to personality, an indulgence in which is an infallible sign of an uneducated and unamiable disposition. Barrow, in his "Sermon against Foolish Jestings," remarks, that "The weaknesses of men, of what kind soever (natural or moral, in quality or in act), considering whence they spring, and how much we are always subject to them, do need excuse, and in fairness call for compassion, not for mirth, to be drawn from them; they, in respect to common humanity, should rather be studiously connived at and concealed, or mildly excused, than wilfully laid open and wantonly desecrated on; they are rather to be secretly deplored than to be openly derided."

The truly pleasant and well-behaved humorist will scorn to convert his wit into a sparring weapon or an offensive missile; but will ever be mindful of the observation of St. James, "If any man offend not in

word, he is a perfect man." Ill-natured wits might take an improving lesson from an anecdote or two which we may here relate: In the midst of a gay party at Versailles, Louis XIV. commenced a facetious story, but concluded it abruptly and insipidly. Presently, one of the company having left the room, the king said, "I am sure you must have observed how very uninteresting my anecdote was. After I had commenced, I recollected that it reflected rather severely on the immediate ancestor of the prince of Armagnac, who has just quitted us; and on this, as on every other occasion, I think it far better to spoil a good story than distress the feelings of a worthy man." The celebrated mimic, Griffen, was asked to imitate the person, manner, and singularly awkward delivery of Dr. Woodward, the geologist and physician, in the character of Dr. Fossil, in a farce then preparing under the title of "Three Hours after Marriage." The mimic dressed himself up as a countryman, and went to the doctor to ask his advice about a long series of diseases with which he pretended his poor wife was afflicted. All this he did to justify and prolong the interview, that he might have sufficient time to study the doctor's manner. This accomplished, he offered him the fee of a guinea, which the doctor declined, saying, "Keep your money, poor man! keep your money! you have need of all your cash and all your patience too, with such a load of diseases at home." The actor, on his return to the farce-writer, related this conversation, and concluded by declaring that he would sooner die than prostitute his talents by making a public laughing-stock of Dr. Woodward, who, receiving him as a poor man, had shown tender humanity and compassionate sympathy at the narrative of his assumed calamities.

As the more a person manifests uneasiness at the direct attacks of a heartless humorist the better sport he proves to him, it is wisest to receive his sallies with apparent indifference, however acutely one may feel his cruel jokes.

He who refuses to do justice to the defenceless, will often be found making unreasonable concessions to the powerful.

THE MIND BEYOND THE GRAVE.

We can not but feel that we are beings of a twofold nature—that our journey to the tomb is short, and the existence beyond it immortal. Is there any attainment that we may reserve when we lay down the body? We know that of the gold which perishes we may take none with us when dust returneth to dust. Of the treasures which the mind accumulates, may we carry aught with us to "that bourne whence no traveller returns"?

We may have been delighted with the studies of nature, and penetrated into those caverns where she perfects her chymistry in secret. Composing and decomposing, changing matter into nameless forms, pursuing the subtlest essences through the air, and resolving even that into its original elements, what will be the gain when we pass from material to immaterial, and this great museum and laboratory, the time-worn earth, shall dissolve in its own central fires?

We may become adepts in the physiology of man, scanning the mechanism of the eye, till light itself unfolds its invisible laws, of the ear, till its most hidden reticulations confessed their mysterious agency with sound, of the heart, till that citadel of life revealed its hermit policy, but will these researches be available in a state of being which "eye hath not seen, nor ear heard, nor the heart of man conceived"?

Will he who fathoms the waters, and computes its pressure and power have need of this skill where there is no sea? Will the mathematician exercise the lore by which he measures the heavens, of the astronomer, the science which discovered the stars, when called to go beyond that light?

Those who have penetrated most deeply into the intellectual structure of man, lifted the curtain from the birth-place of thought, traced the springs of attention to their fountain, and thrown the veiled shrinking motive into the crucible, perceive the object of their study taking a new form, enter into a disembodied and unknown state of existence, and receiving powers adapted to its laws and modes of intercourse.

We have no proof that the sciences to which years of labor have been devoted will survive the tomb. But the impressions they have made, the dispositions they have nurtured, the good or evil they have helped to stamp upon the soul, will go with it into eternity. The adoring awe, with deep humility, inspired by the study of the planets and their laws, the love of truth which he cherished, who pursued the science that demonstrates it, will find a response among arch-angels. The praise that was learned amid the melodies of nature, or from the lyre of consecrated genius, may pour its perfected tones from a seraph's harp. This goodness taught in the whole frame of creation, by the flower lifting its honey-cup to the insect, and the leaf drawing its green curtain around the nursing chamber of the smallest bird, by the pure stream, refreshing both the grass and the flocks that feed on it, the tree, and the master of its fruits, the tender charity caught from the happiness of the humblest creature, will be at home in his presence, who hath pronounced himself the "God of love."

The studies, therefore, which we pursue as the means of intellectual delight, or the instruments of acquiring wealth or honor among men, are valuable at the close of life only as they have prompted those dispositions which constitute the bliss of an unending existence. Tested by its bearing and result, it transcends all other sciences. The knowledge which it imparts does not perish with the stroke which disunites the body from its ethereal companion. While its precepts lead to the highest improvement of this state of probation, its spirit is congenial with the ineffable reward to which we aspire. It is the preparation for immortality, which should be daily and hourly wrought out, amid all the mutations of time.

LIGHT FROM FLOWERS.

Among the remarkable effects produced through the agency of light, a singular phenomenon in natural history is given in "Dick's Practical Astronomer," as related by a Swedish lecturer. One evening, he

perceived a faint flash of light repeatedly dart from a marigold. Surprised at such an uncommon appearance, he resolved to examine it with attention; and, to be assured it was no deception of the eye, he placed a man near him, with orders to make a signal at the moment when he observed the light. They both saw it constantly at the same moment. The light was most brilliant on marigolds of an orange or flame color, but scarcely visible on the pale ones. The flash was frequently seen on the same flower two or three times in quick succession, but more commonly at intervals of several minutes: and when several flowers in the same place emitted their light together, it could be observed at a considerable distance. The phenomenon was remarked in the months of July and August at sunset, and for half an hour when the atmosphere was clear; but after a rainy day, or when the air was loaded with vapors, nothing of it was seen. The marigold, monk's-hood, orange-lily, and Indian pink, emitted flashes more or less vivid. As to the cause of this phenomenon, says Dick, different opinions may be entertained. From the rapidity of the flash and other circumstances, it may be conjectured that *electricity* is concerned in producing this appearance. Mr. Haggern of Sweden after observing the flash from the orange-lily, the anthers of which are at a considerable distance from the petals, found that the light proceeded from the petals only; whence he concludes that this electrical light is caused by the pollen, which, in flying off is scattered on the petals.

THE MOCKING-BIRD.



HIS very extraordinary bird, which, in extent and variety of vocal powers, stands unrivalled by all the feathered songsters of America or perhaps any other country, is peculiar to the New World; and inhabits a very considerable extent of both



The Mocking Bird.

North and South America, having been traced from the states of New England to Brazil, and also among many of the adjacent islands. They are, however, much more numerous in those states south than those north of the river Delaware; being generally migratory in the latter, and resident (at least many of them) in the former. A warm climate, and low country not far from the sea, seems most congenial to their nature; the species are accordingly found to be less numerous to the west than east of the great range of Allegany, in the same parallels of latitude. In these regions the berries of the red cedar, myrtle, holly, many species of smilax, together with gum berries, gall berries, and a profuse variety of others, abound, and furnish them with a perpetual feast. Winged insects also, of which they are very fond and very expert in catching, are there plentiful even in the winter season.

The precise time at which the mocking-bird begins to build his nest varies according to the latitude in which he resides, from the beginning of April to the middle of May. There are particular situations to which he gives the preference. A solitary thorn-bush, an almost impenetrable thicket, an orange-tree, cedar, or holly-bush, are favorite spots and frequently selected. It is no great objection to the bird that a farm or mansion-house happens to be near; always ready to defend, but never over-anxious to conceal his nest, he very often builds within a small distance of the house, and not unfrequently in a pear or apple-tree, rarely at a greater height than six or seven feet from the ground. The nest varies a little according to the convenience of collecting suitable materials. Generally it is composed of, first, a quantity of dry twigs and sticks, then withered tops of weeds of the preceding year, intermixed with fine straw, hay, pieces of wool and tow; and, lastly, a thick layer of fine fibrous roots, of a light brown color, lines the whole. The female sits fourteen days, and generally produces two broods in the season, unless robbed of her eggs, in which case she will even build and lay the third time. She is, however, very jealous of her nest, and very apt to forsake it if much disturbed. During the period of incubation, neither

cat, dog, animal, nor man, can approach the nest without being attacked. The cats, in particular, are persecuted whenever they make their appearance, till obliged to retreat. But his whole vengeance is more particularly directed against that mortal enemy of his eggs and young, the black snake. Whenever the insidious approaches of this reptile are discovered, the male darts upon it with the rapidity of an arrow, dexterously eluding its bite and striking it violently and incessantly about the head, where it is very vulnerable. The snake soon becomes sensible of its danger, and seeks to escape; but the intrepid defender of his young redoubles his exertions, and, unless his antagonist be of great magnitude, often succeeds in destroying him. All his pretended powers of fascination avail it nothing against the vengeance of this noble bird. As the snake's strength begins to flag, the mocking-bird seizes and lifts it up partly from the ground, beating it with its wings, and when the business is completed, he returns to the nest of his young, mounts the summit of the bush, and pours forth a torrent of song in token of victory.

The mocking-bird is nine and a half inches long and thirteen across when its wings are spread. Some individuals are, however, larger and some smaller, those of the first hatch being uniformly the largest. The upper parts of the head, neck, and back, are a dark brownish ash, and when new moulted, a fine light gray; the wings and tail are nearly black, the first and second rows of coverts tipped with white; the primary, in some males, are wholly white, in others tinged with brown. The three first primaries are white from their roots as far as their coverts; the white on the next six extends from an inch to one and three fourths further down, descending equally on each side the feather; the tail is cuneiform; the two exterior feathers wholly white, the rest, except the middle ones, tipped with white; the chin is white; sides of the neck, breast, belly, and vent, a brownish white, much purer in wild birds than in those that have been domesticated; iris of the eye, yellowish cream colored, inclining to golden; bill black; the base of the lower mandible whitish; legs and feet

black and strong. The female much resembles the male, and is only distinguishable by the white of her wings being less pure and broad, and her black feathers having a more rusty hue.

It will be seen from this description, that though the plumage of the mocking-bird is none of the homeliest, it has nothing gaudy or brilliant in it; and, had he nothing else to recommend him, would scarcely entitle him to notice. But his figure is well proportioned and even handsome. The ease, elegance, and rapidity, of his movements, the animation of his eye, and the intelligence he displays in listening and laying up lessons, from almost every species of the feathered creation within his hearing, are really surprising, and mark the peculiarity of his genius. To these qualities may be added that of a voice full, strong, and musical, and capable of almost every modulation, from the clear, mellow tones of the wood-thrush to the savage scream of the bald-eagle. In measure and accent he faithfully follows his originals; in force and sweetness of expression he greatly improves upon them. In his native groves, mounted on the top of a tall bush or half-grown tree, in the dawn of the morning, while the woods are already vocal with a multitude of warblers, his admirable song rises pre-eminent over every competitor. The ear can listen to his music alone, to which that of all the others seems a mere accompaniment. Neither is his strain altogether imitative. His own native notes are bold and full, and varied seemingly beyond all limits. They consist of short expressions of two, three, or, at the most, five or six syllables, generally interspersed with imitations, and all of them uttered with great emphasis and rapidity, and continued with undiminished ardor for half an hour or an hour at a time. His expanded wings and tail, glistening with white, and the buoyant gayety of his action, arresting the eye as his song most irresistibly does the ear, he sweeps round with enthusiastic ecstasy, and mounts and descends as his song swells or dies away. While thus exerting himself, a bystander, destitute of sight, would suppose that the whole feathered tribes had assembled together on a trial of skill, each striving to produce his

utmost effect. He often deceives the sportsman, and sends him in search of birds that are not, perhaps, within miles of him, but whose note he exactly imitates: even birds themselves are frequently imposed upon by this admirable mimic, and are decoyed by the fancied calls of their mates, or dive with precipitation into the depth of thickets at the scream of what they suppose to be the sparrow-hawk.

The mocking-bird loses little of the power and energy of his song by confinement. In his domesticated state, when he commences his career of song, it is impossible to stand by uninterested. He whistles for the dog; Cesar starts up, wags his tail, and runs to meet his master. He squeaks out like a hurt chicken, and the hen hurries about with hanging wings and bristled feathers, chuckling to protect its injured brood. The barking of the dog, the mewing of the cat, the creaking of a passing wheelbarrow, follow with great truth and rapidity. He repeats the tune taught him by his master, though of considerable length, fully and faithfully; he runs over the quaverings of the canary, and the clear whistlings of the Virginia nightingale, or red-bird, with such superior execution and effect that the mortified songsters feel their own inferiority, and become altogether silent, while he seems to triumph in their defeat by redoubling his exertions.

This excessive fondness for variety, however, in the opinion of some, injures his song. His elevated imitations of the brown thrush are frequently interrupted by the crowing of cocks; and the warblings of the blue-bird, which he exquisitely manages, are mingled with the screaming of swallows or the cackling of hens. Amid the simple melody of the robin, one is suddenly surprised by the shrill reiterations of the whip-poor-will, while the notes of the kildeer, blue-jay, martin, baltimore, and twenty others, succeed, with such imposing reality, that the auditors look round for the originals, and with astonishment discover that the sole performer in this singular concert is the admirable bird now before us. During this exhibition of his powers, he spreads his wings, expands his tail, and throws him-

self around the cage in all the ecstasy of enthusiasm, seeming not only to sing but to dance, keeping time to the measure of his own music. Both in his native and domesticated state, during the stillness of the night, as soon as the moon rises, he begins his delightful solo, making the whole neighborhood resound with his inimitable medley. The mocking-bird is frequently taken in trap-cages, and, by proper management, may be made sufficiently tame to sing. The usual price of a singing-bird, is from seven to fifteen, and even twenty dollars. Mr. Wilson has known fifty dollars paid for a remarkably fine singer; and one instance where one hundred dollars were refused for a still more extraordinary one. Attempts have been made to induce these charming birds to pair, and rear their young in a state of confinement, and the result has been such as to prove it, by proper management, perfectly practicable.

THE MOMENT OF SUCCESS.



IN the fair bowers of paradise, ere the serpent had accomplished his deadly work, or the tree of knowledge yielded its fatal gift, labor and care were unknown. Fruitful nature yielded, unsought, her richest treasures, and the bounties of heaven, gently as its own dew, descended upon man, demanding no return save gratitude and enjoyment. But, when he had passed the precincts of that happy place, for ever closed against him by the flaming sword of the angelic guard, far different were the conditions of his being. In the sweat of his brow was he to eat his bread; with labor, toil, and suffering, was he to purchase all earthly good. Stern as was this decree of the Almighty, mercy was enclosed therein—dark as was the cloud of human destiny, the rainbow of peace and joy was painted upon it. Rest was to be doubly sweet after toil—prosperity more bright after adversity—success more

glorious after obstacles surmounted and difficulties vanquished. True it was, the soft vales of paradise were no longer to be his inheritance, and the bright inhabitants of heaven his familiar guests, no more; yet some flowerets of bliss, lovely as those of Eden, were to gladden his exile with their beauty, and still to be to him and his descendants, the sweet teachers in the lessons of happiness. Yes, surely, in this desolate world,

"Some moments are to mortals given,
With less of earth in them than heaven."

Some brief seasons, which fully compensate for years of toil and pain, bringing to the soul an intensity of enjoyment, which makes it conscious of its vast capabilities of happiness, when the fetters of mortality shall be broken. In the arrangements of Infinite Wisdom, such feelings have been decreed to man, as the reward of exertion in the attainment of laudable objects—the laurel crown of well-directed effort. No faculty of our being, exercised in its proper sphere, can fail to bring this promised blessing. And, though all experience in kind this happiness, from the child, who triumphantly sees his tiny house stand secure, to the sovereign, who beholds successfully carried out his vast plans for a nation's welfare, yet the degree must depend on the greatness of that purpose, and the difficulties that have impeded its accomplishment.

Who can know what a moment was that for Columbus, when after years of untiring, ever-baffled effort for the attainment of his favorite object—after a thousand dangers of an unknown ocean, and many a sleepless and anxious night, he saw floating near his vessel a green herb—the joyful herald to his troubled spirit, of the long-sought object of his ardent hopes. And when these joyful anticipations were confirmed by the sight of that lovely island, reposing upon the ocean in all its greenness and beauty, inhabited by an unknown race—perhaps the neighbor of a mighty continent, which was by him to be bequeathed to the world, and become the perpetual monument of his fame, what emotions must have filled his soul! A joy so pure, so deep, so concentrated, as to have outweighed whole years of suffering! What though his childhood had

been spent in the midst of privations and dangers, and the fountains of joy peculiar to that happy season, to him almost unknown? what though the bright dreams of his youthful imagination were indulged in the silence of solitude, finding in no sympathizing breast an answering chord; and the deep yearnings of his enthusiastic nature made known, only to be chilled and repressed by the disapprobation of dull mediocrity? What though his more mature years were marked by disappointment and sorrow, and that agony that a noble mind can so deeply feel, when, conscious of its own greatness, and the loftiness and integrity of its purposes, it finds them unappreciated, or met with indifference or contempt? What though he had left the shores of Spain, amid the jeers and maledictions of the spectators, denounced as a visionary—a mark for the finger of scorn, with a world of dread uncertainty present to his imagination, and none to ask the blessing of Heaven on an enterprise so chimerical, or commend him to that Being, who holds the waters in the hollow of his hand? Was there ever prospect so gloomy—ever circumstances so disheartening? But, in that moment of success—in the realization of all those brilliant hopes of life's fair morning—in the actual possession of the goal, to gain which his whole life had been consecrated to self-denial and suffering, the trials of the past were remembered no more. He was to return to his adopted land in triumph—to see himself an object of applause and admiration, where but late, he had been one of pity and contempt; to be welcomed to the presence of royalty, bearing with him a gift that even majesty would be proud to accept—the gift of a new world.

From Columbus, we turn to another of the sons of genius, one who discovered, not a world, but the secret and invisible chain that binds all worlds—the immortal Newton. We are told by his biographer, that when he perceived that the great law of gravitation—a law whose existence for years he had suspected, and labored to prove, was about to be established beyond a doubt, by his calculations, so deeply was he affected by the grandeur of the discovery, and the astonishing effects resulting from it, that he was obliged to commit to

the firmer hand and cooler judgment of a friend, the completion of what was to give his name to immortality. It was a triumph of intellect, that shook the pillars of the frail tenement, that obstructed its far-seeing vision, and limited its heavenward aspirations. What had he not accomplished? Truly, he had become the high priest of science, and entered within the veil never before lifted to mortal vision! Before him was spread out the illimitable universe, with its systems of worlds, all revolving in their aerial and unwearied journeys, in allegiance to that same simple but grand and beautiful law that brought the apple to the ground. What though, since touched by the hand of Omnipotence, the complicated machinery of the material world, had moved in "solemn silence," it was now compelled, at the mandate of genius, to disclose its secrets, and reveal to mortal ear its harmonies. In that moment of success, he must have felt that his name henceforth was to be linked with the beautiful order of the universe, and his fame written in the heavens.

On the page of history stands another name, more dear to every American heart than that of the discoverer of this vast continent, or the promulgator of nature's hidden laws—our own beloved Washington. In the glorious success that crowned his noble purposes and indefatigable exertions for his country's good, another bright example is left to the aspirant after those imperishable honors, that encircle the brow of him who becomes the benefactor of his race. Do they not bid him, when he feels within him the upspringing of a lofty sentiment—a consciousness of powers that may contribute to the elevation of man, to press on through difficulties and dangers, with duty for his watchword, and the arm of Omnipotence for his defence, till the object is attained—the victory won? And how boundless is the field of laudable ambition! True, in no far distant ocean, may an unknown world be awaiting the approach of genius to give it a name in the annals of time—no grand universal truth, may, at his bidding, stand confessed to the admiration of the world; nor, like Washington, may it be his to bring to a successful issue a great political revolution, and

to be the founder of a republic, whose name is a distinguished star in the constellation of nations. Along these bright paths his destiny may not lead him; yet, let him remember that in the moral and physical world, the cause of truth still calls for champions—that from the great heart of humanity, may still be heard the unceasing groan, extorted by suffering, ignorance, and guilt; that the field of doing good is everywhere ripe unto harvest, and success certain, if the spirit faints not. Nor should he forget that in this struggle for the supremacy of the nobler principles of our nature, the lowest soldier, if he stands his ground, and fearlessly unsheathes his weapon, contributes to the victory, and will share the reward; that every noble thought sent forth from his own soul, will find, like the winged seed, its resting-place, and perchance, nerve some arm more vigorous than his own, or like a wheel within a wheel, set in motion the energies of some spirit, that shall prove to the world a Washington or a Newton. In the noble cause of good to man, surely none should despair, for—

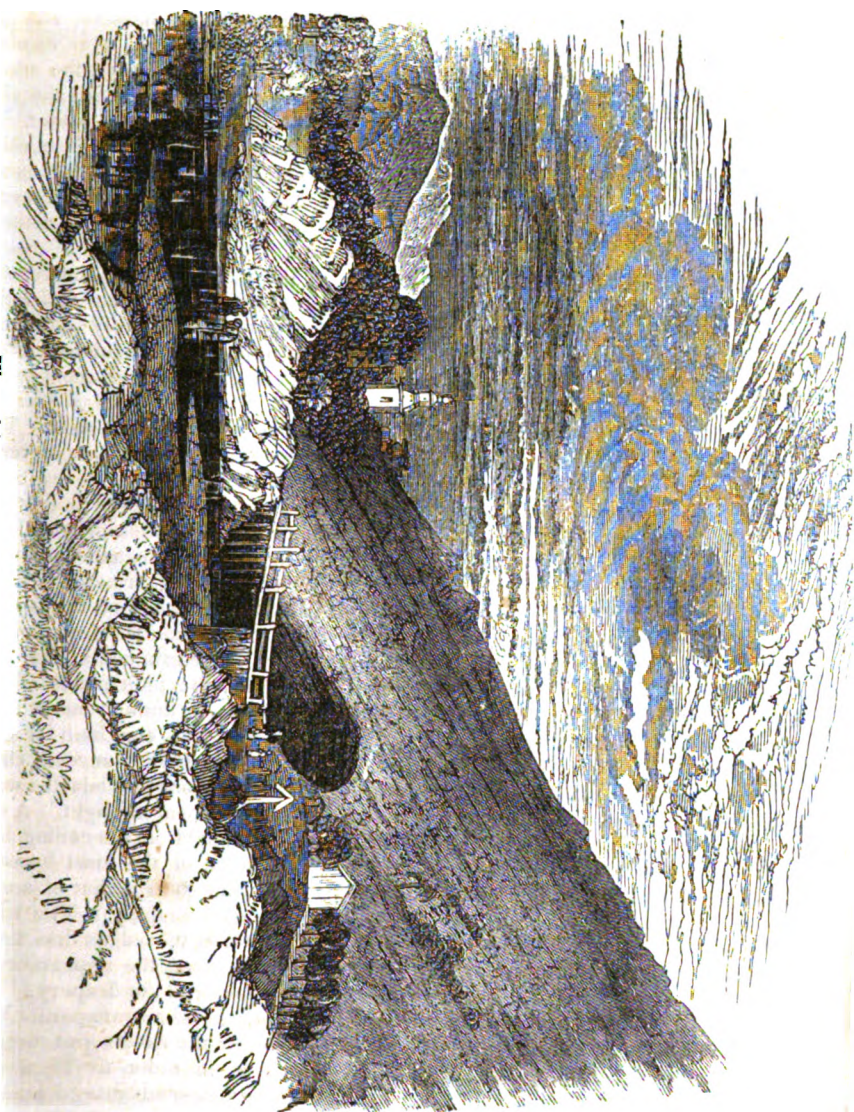
"Lives of great men all remind us,
We can make our lives sublime,
And, departing, leave behind us,
Footsteps on the sands of time.
Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait."

GROTTO OF ADELSBERG.



THE circle of Carniola is one of the most interesting portions of the dominions of Austria. Its bare and calcareous mountains are grand and striking, and their geological structure is peculiar. The waters of subterranean rivers issue from their recesses, and the lake of Zirknitz is celebrated on account of the singular fact that at stated times it suddenly becomes dry, its contents being drained into the bowels of the mountains, and after the lapse of a certain period, they again issue into their usual ba-

sin. Adelsberg is situated half-way between Laybach and Trieste, in the district which overhangs the Adriatic, and, as shown in the engraving, is placed at the foot of a considerable eminence. There are two apertures in this eminence, one of which receives the river Poick. One of these openings seems, from its regular appearance, to be the work of art rather than of nature, while the other aperture has none of this regularity, but is broken into jagged shapes. The entrance by which visitors are conducted into these caverns is considerably higher than that by which the river disappears; and the gallery which it forms is divided from the other cavern by a partition, which is broken through in various places, the visiter hearing the waters rushing beneath along their subterraneous bed. This gallery runs but a short way into the mountain, while, "as you advance, the murmurings of the stream and the distant gleams of daylight die away together, and the silence and darkness of ancient night reign around." Such is the entrance to the cavern of Adelsberg; but its recesses can not be penetrated without the assistance of lights. The visiter can then proceed along the passage above described, which gradually widens, until it opens into an immense cavern, or rather there are two caverns, for it is crossed by a ledge of rock, which does not rise to the roof. This ledge forms a natural bridge, on one side of which the waters furiously pursue their course, and further on they have worn a passage through the partition which divides the cavern. The darkness is oppressive and impenetrable, and the lights, which are too feeble to pierce through the obscurity, only render it more striking. The waters rush along with a heavy and indistinct sound. It is only within a comparatively recent period that any one has been so adventurous as to proceed any further than this ledge, as it sinks down precipitously. At the point where the descent is the least abrupt, a flight of steps was cut, the partition was pierced, and steps were cut on the other side, which land the visiter on the floor of the larger cavern. Here the river flows steadily along in a well-indented channel, and it enters the mountain at the opposite wall of the cavern. A wooden



View of the Entrance to the Cavern of Adelberg.

bridge is thrown across the river, and the terminating wall of the cavern apparently opposes all further progress. About twenty years ago some individual, by means of the projecting points of rock, reached the top of this wall, which is about forty feet high. His adventurous spirit was rewarded by discovering that the wall was not so high as the roof, and another cavern presented itself. Steps were cut on the opposite side, and beyond this there was found a succession of immense caverns, branching off in two separate series.

The suite of caverns to the left is the more extensive, ample, and majestic; but the one which branches to the right, though smaller, is richer in varied and fantastic forms. They are all different in size and form and ornament, and are connected by passages which are sometimes low and bare, sometimes spacious and lofty, supported by pillars, and fretted with cornices of the purest stalactite. The columns are sometimes uniform in their mass and singularly placed; sometimes they are so regularly arranged, and consist of smaller pillars so nicely clustered together, that one believes he is walking up the nave of a Gothic cathedral. Many of these columns, which are entirely insulated, have a diameter of three, four, and even five feet. Frequently the pillar is interrupted as it were in the middle, losing its columnar form, and twisting, dividing, or spreading itself out into innumerable shapes. Sometimes it dilates into a broad thin plate, almost transparent in the light of a lamp; sometimes this plate curves itself round in a circular form, sometimes the descending part tapers to a point, which rests on the broad surface of the ascending stalagmite. The walls are entirely coated with the substance, and, in the smaller grottoes, it is so pure, that travellers have covered it with names written in pencil, which have already resisted the moisture five or six years. The other division is more spacious, and extends much further. The caverns which compose it are wider and loftier, but not so beautifully adorned as in the other. The enormous clustered columns of stalactite that seem to support the everlasting roof from which they have only originated, often tower to such a height, that the lights

do not enable you to discover their summit; but, though infinitely majestic, they are rougher, darker, and more shapeless than in the smaller suite. The further you advance, the elevations become bolder, the columns more massive, and the forms more diversified, till, after running about six miles into the earth, the scene of wonderment terminates with the element with which it began, water. A small subterraneous lake, deep, clear, cold, and dead-still, prevents all further progress. It has not been passed; it would therefore be too much to say that nothing lies beyond.

One of the most spacious and regular of any of the caverns, of an oval form, about sixty feet long and forty broad, and whose roof is not visible owing to its great height, is used as a ball-room by the peasantry of Adelsberg once a year, on the festival of their patron saint. The floor is smooth; the walls are covered with stalactite, but are otherwise less ornamented than the other caverns; a few natural stone seats and wooden benches constitute the furniture, and candles are lighted in rustic chandeliers, formed of a wooden cross stuck horizontally on the top of a pole. Here, many hundred feet beneath the surface of the earth, and a mile from the light of day, the rude music of the Carniolian resounds through more magnificent halls than were ever built for monarchs. The flame of the uncouth chandeliers is reflected from the stalactite walls in a blaze of ever-changing light. A vast stalactite has formed from the ceiling, having the appearance of the most beautiful alabaster, and the form is that of a most perfectly arranged drapery. The trickling of the water at the edges has thickened them, and given the appearance of an edging or border to the drapery. The substance being semi-transparent, the guides who show the cavern put their torches behind it, in order to display its beauty to the greatest advantage amid the surrounding darkness. ●

GIGANTIC.—So vast is the Atlantic ocean, that it has been said that all the ships in the world might be so dispersed over it that none would be able to see one another.



Grotto of the Maddalena, at Adelsberg.

DYSPEPSIA.



DARKLY poetical notion was current among our forefathers, that a person of a morose, unamiable disposition was possessed of a devil. They believed that he was merely the outer casing, the sheep's clothing of a sort of supernatural wolf; that if the visible shell, in the likeness of man, could be removed, there would appear to the terrified visions of the multitude a figure with horns, hoofs, a tail, and the very sharp goad with which it was supposed to prick on its victim to say spiteful things, and to do bad actions. This idea of our forefathers has been proved by anatomy and physiology (of which they knew nothing) to be quite erroneous as far as regards the bodily presence of the evil spirit. Science has robbed us of the horns, the hoofs, and the tail; but it has, with all its poetry-spoiling discoveries, still left us the essential demon. The monster is called by nosologists "dyspepsia," and by the rest of the world indigestion.

Many a snappish, disagreeable man, who is feared at home as a domestic tyrant, shunned abroad as a social Tartar, and denounced everywhere as the wilful incarnation of ill-temper, is nothing more than the victim of the demon dyspepsia. Perhaps he was in his early years as good-humored and kind a being as ever breathed. Gradually, his friends and relations perceived a change in his disposition. This began, in all probability, by snappishness to his wife, scolding his children, and occasionally kicking his dog. When expostulated with for allowing these causeless improprieties to grow upon him, he is ready enough to own his faults, but at the same time equally ready to make excuses for them. He declares business is going wrong, though you know it never prospered better; or that his children worry him, though it is evident he has terrified them into taciturnity and shrinking obedience. He makes every excuse but the right one; because, poor wretch, he is perfectly ignorant of the real cause. He really be-

lieves what he says, and thinks that he is on the road to the bankrupt court, and that his offspring really are disobedient. Alas! it is one of the characteristics of the insidious demon he is possessed with, to hide itself from the ken of its victim. Even when the monster deranges his bodily health, and drives him to the doctor, he describes every symptom but those which are indicative of the real disease. The skilful physician, however, finds it out in spite of, or rather in consequence of, his mystifications, and proceeds to exorcise the evil spirit—not after the ancient plan with bell, book, and candle—but with pill, draught, and plenty of exercise.

When, therefore, we meet with such a man as we have described, let us be a little charitable. Don't let us denounce him without remorse or mitigation. Pity is the proper sentiment which he should awaken. Human nature is not so innately vicious as some philosophers imagine; instinctively, our good impulses predominate, and would remain dominant, were they not so often blunted, checked, and strangled by dyspepsia. Imagine yourself in a dyspeptic condition, and then ask whether you could be amiable to your fellow-creatures, or be able to assume that virtue when you have it not? Fancy yourself in a state which, when asked about it, you are obliged to describe as a something which makes you wretchedly uncomfortable, but you don't know what; a condition which, nevertheless, unfits you for occupation; a feeling which imparts a distressing craving for food, combined with a disgust at the very idea of eating it; a constant drowsiness, without the power of sleeping; a sensation of overwhelming fatigue and weariness, with a longing to take exercise; a weight over the brow, a weight at each joint, a weight at every extremity, and a still greater weight in the stomach. Then as to the state of your nerves: conceive yourself in the lowest of low spirits; in hourly dread of some misfortune; haunted with suspicions regarding your dearest friends; looking upon your whole household as a set of conspirators against your comfort: feeling all this, I say, with a thorough conviction that such sensations mislead you; that in reality no misfortune impends;

and that your family love you dearly. Then at night, instead of enjoying the benefit of

"Nature's sweet restorer, balmy sleep,"

you are visited by your attendant demon's terrible ally, nightmare, who inflicts even greater tortures on you than his daytime colleague. "In a half-waking or inter-somnious condition," saith the learned Dr. Von Druffel of Berlin, "you behold a monster of some kind—a goblin, a fiery horse, a wild gigantic man—glide slowly toward you. This apparition seats itself on the pit of your stomach, and presses you with such a crushing weight that you can neither breathe nor move a limb." You are not asleep; you are sufficiently awake to know that could you but move your little finger the charm would be broken, and the vile nightmare gallop away. But you can not: all power is removed, and there the imaginary quadruped remains, caprioling upon your devoted breast, like a heavily-shod war-horse on parade. Even when you fall asleep you are no better off. You have horrid visions. You dream yourself to be the most detestable villain in existence. In the short space of an hour's nap, you inflict tortures on some dear friend which would have frightened a Spanish inquisitor. You commit crimes of unheard-of atrocity, and only escape the gibbet by waking, the victim of remorse and despair.

After enduring all this, picture yourself seated at breakfast, and though surrounded with every comfort administered by a most affectionate household, just say whether you think it to be within the pale of human probability that you could look, speak, or behave pleasantly? If your wife were to offer you the sincerest sympathy, and the tenderest condolences, would not the internal demon "dyspepsia," incite you to accuse her of "teasing" you? Can you for a moment believe that, in such a state of mind and stomach, your expostulation would be mild and Christian-like, if the butter were bad, or the egg you had just broken somewhat too odoriferous? Would you, if ever so coaxingly asked, hand over a check for your wife's milliner's bill without grumbling? If you could do all these things, you are more than mortal.

Let me repeat, therefore, when you hear

an individual denounced as a monster of ill-humor, do not be too harsh upon his moral character, before you have inquired into his physical symptoms. Many a man who is accused of having a bad heart, ought rather to be described as having a bad stomach, for the immense influence which that organ exercises over the worldly conduct of mankind is greatly overlooked. A female patient of the celebrated French physician Pinel, who was fully possessed with the demon dyspepsia, and knew it, thus details her condition:—"The foundation of all my misfortunes is in my stomach. It is so sensitive, that pain, grief, pleasure, and, in a word, all sorts of moral affections, seem to take their origin in it. Even a frown from a friend wounds me so sensibly, that my whole system is disagreeably affected by it; I think by means of my stomach, if I may be allowed so to express myself." How many apparently evil-disposed persons whom one meets with may be precisely in this lady's condition, and think and act from the dictates of the stomach, or rather from those of the demon contained in it—dyspepsia! How frequently, therefore, may not our judgment err in the matter of first causes, regarding petty cruelties and small tyrannies? When, for example, a rich debtor refuses a poor creditor a long-deferred payment, may not this piece of injustice be the result, not so much of sheer dishonesty, as of deranged digestive organs? May we not attribute it less to a defect in the moral sentiments, than to evil influences diffused over his nervous system by a piece of undigested pigeon-pie? I knew a whole family whose happiness seemed to depend upon what the head of it ate for dinner. His dietary was watched, especially by the younger branches, with incessant anxiety. After mutton-chops and boiled rice, they could—provided he abstained from pudding—coax papa out of anything. Boiled beef boded evil; and in that case they cared very little to come in as usual to take their share of dessert. When lobster-salad had been partaken of, they crept about the house like mice, and kept as much as possible out of papa's way. During his paroxysms of ill-humor, reasoning was vain; neither the expostulations

of his brother the rector, nor the kind entreaties of a wife whom he devotedly loved, were effectual in restraining his tetchy ebullitions of spleen. The demon within grew daily more influential, till he began to be shunned by his friends. No good effect was produced even by that. At length a medical adviser was consulted respecting his cadaverous appearance and certain pains which "shot" across the shoulders. The doctor ordered him to Cheltenham, placed him on a strict regimen, enjoined frequent visits to the pump-room, and in three months our friend returned, to all appearance an angel of good temper. The banished roses returned to his cheeks—he felt strong and hearty, and never spoke a cross word. His meals were no longer watched, for the juveniles found him ever kind and complying, no matter what was for dinner. It was, however, observed that he ate much more sparingly than formerly, and never would allow such a thing as a round of salt beef or a lobster to enter his door.

It is not too much to affirm, that half the crimes to which human frailty is liable are concocted in the stomach. The poor are incited to mischief by the cravings of their digestive organs for something to do; while the rich are often impelled to wrong, because they give their digestive powers more than they can do. If the former could keep fuller stomachs, and the latter emptier ones, there would assuredly be fewer evil deeds in the world than are perpetrated at present.

POWER OF THE VOICE OVER CHILDREN.

It is usual to attempt the management of children either by corporeal punishment, or by rewards addressed to the senses, or by words alone. There is one other means of government, the power and importance of which are seldom regarded—**I** refer to the human voice. A blow may be inflicted on a child, accompanied by words so uttered as to counteract entirely its intended effect; or the parent may use language, in the correction of the child, not objectionable in itself, yet

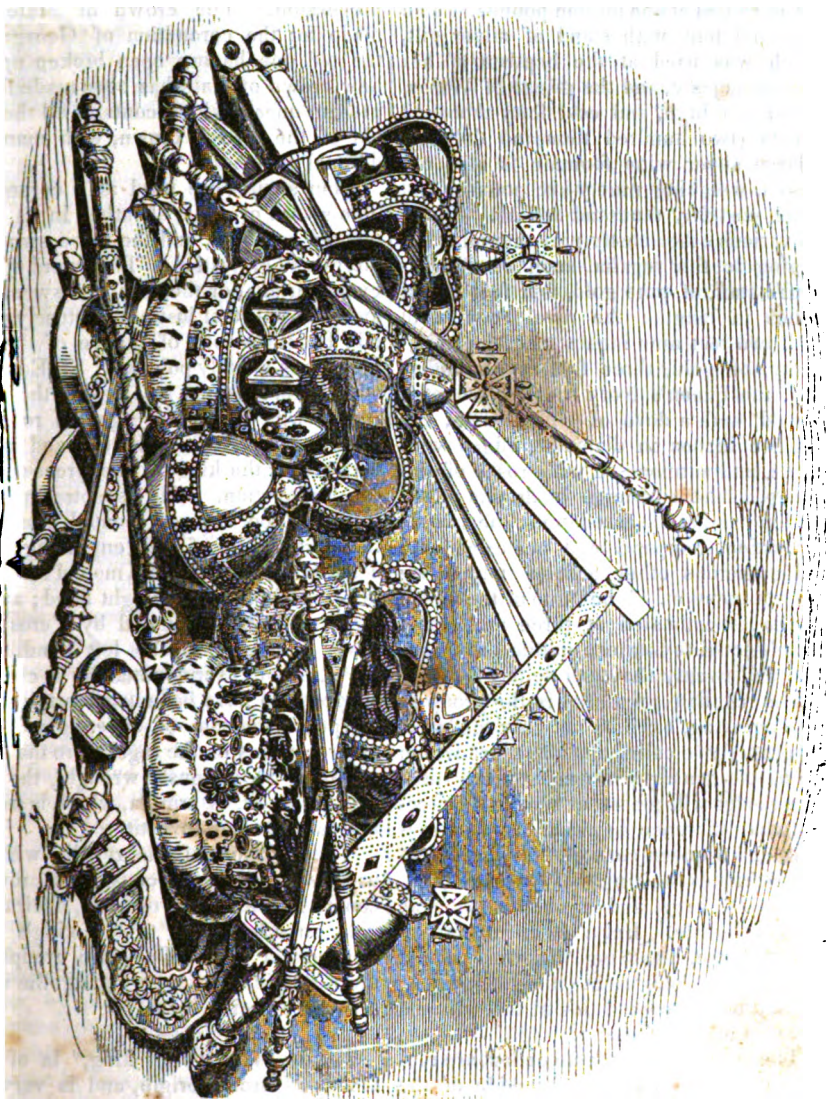
spoken in a tone which more than defeats its influence. Let any one endeavor to recall the image of a fond mother long since at rest in heaven. Her sweet smile and ever clear countenance are brought vividly to recollection; and so also is her voice, and blessed is that parent who is endowed with a pleasing utterance. What is it which lulls the infant to repose? It is no array of mere words. There is no charm to the untaught one in letters, syllables, and sentences. It is the sound which strikes its little ear that soothes and composes it to sleep. A few notes, however unskillfully arranged, if uttered in a soft tone, are found to possess a magic influence. Think we, that this influence is confined to the cradle? No; it is diffused over every age, and ceases not while the child is under the parental roof. In the pressure of duty, we are tempted to utter ourselves hastily to our children. Perhaps a threat is expressed in a loud and irritating tone; instead of allaying the passions of the child, it serves directly to increase them. Every fretful expression awakens in him the same spirit which produced it. So does a pleasant voice call up agreeable feelings. Whatever disposition, therefore, we would encourage in a child, the same we should manifest in the tone in which we address them.

THE REGALIA OF THE BRITISH CROWN.



HE regalia, deposited in a room recently appropriated to that purpose, presents a magnificent spectacle. Here is the ancient imperial crown of Charles II.; prince of Wales' crown, the ancient queen's crown, but the most magnificent display of England's regalia is the crown of her present majesty. The cap is of purple velvet, with silver hoops covered with diamonds; on the top of these hoops is a ball covered with smaller diamonds, with

The Regalia of England used at Coronations.



a cross of brilliants, containing a remarkable central sapphire. On the front is a heart-shaped ruby, said to have been worn by Edward the black prince. This diamond weighs one and three fourths pounds, and is valued at one million pounds. The baptismal font with stand of silver gilt, which was used at the baptism of her present majesty, and the prince of Wales, is four feet high, and cost forty thousand pounds (two hundred thousand dollars). A large silver wine fountain is also exhibited, weighing ninety-six pounds, and which cost fifty thousand dollars. There are various other costly paraphernalia belonging to the regalia, such as St. Edward's staff, of pure gold, four feet seven inches in length; the royal sceptre, of gold, two feet nine inches long, the rod of equity, of gold, three feet seven inches long, the queen's ivory sceptre, mounted in gold; with a dove of white onyx; the orb, five inches in diameter, edged with pearls, and surmounted with roses of diamonds. The sovereign holds this orb in the left hand at the coronation; the swords of Justice, temporal and ecclesiastical; and numerous other articles which we can not mention. The value of the whole regalia is estimated at three millions of pounds equal to fourteen millions five hundred and twenty thousand dollars!

The regalia represented in the group in our engraving, exhibits not only the regalia, properly so called, but also those which are used when a queen consort is crowned. The reader will please to bear in recollection the difference between a queen regnant, and a queen consort. A queen regnant occupies the kingly office, as of right. She is *the* king, and is called queen as being a female. But a queen consort is called queen, as being the wife of the king, and her only right (if right it can be called) to be crowned lies in the will and pleasure of her husband.

The regalia, properly so called, are represented grouped on the left side of the engraving. The two crowns are the crown of state and the imperial crown. The imperial crown is also called St. Edward's crown, as having been made for the coronation of Charles II. to supply the place of the old crown (which bore the name of Edward the confessor) destroyed, along

with the other ancient regalia, by order of parliament. The imperial crown is "the crown royal, which is set upon the king's head;" the crown of state is for the accommodation of the king, to be worn in procession. The crown of state was made for the coronation of George IV., the old one having been broken up. A new crown of state has been made for the present queen, which contains all the jewels of the former crown, with many additional ones.

Four swords are used at a coronation. The sword of state, sheathed in its ornamented scabbard, and the three swords of mercy and of justice. The sword of mercy is Curtana, or the pointless sword; the sword of spiritual justice is obtusely pointed; but the sword of justice of the temporality is acutely pointed. St. Edward's staff is represented as crossing the imperial crown; it is a large golden rod, with a mound and cross at the top, and is carried before the king in the procession to the coronation. The sceptre and the virge, or rod, are represented crossed in the foreground of the engraving. The sceptre, surmounted by a mound and cross, is placed in the king's right hand; and the virge, or rod, surmounted by a cross and dove, is placed in the left hand. The globe, or orb, surmounted by a cross, is supposed to have been used originally as a type or emblem of sovereignty. The other portions of the regalia are the spurs, of fine gold, curiously wrought, the ring, and the armil, or armilla, which is used in the ceremony of investiture.

That portion of the regalia which is used when a queen consort is crowned, consists of a crown of state, a circlet of gold, an orb, similar to the king's sceptres, and a ring. They are grouped on the right side of the engraving, the sword of state crossing them.

KING.—The word "king," is of Teutonic or German origin, and is very generally stated by etymologists to be derived from the same root as "cunning," used in its old signification of skill or capacity. The title of *cuning*, *cyning*, *cyng*, and now "king," was bestowed by consent and acclamation on the bold leader who showed his capacity for the post.

MARCH.



ARCH, named so by Romulus, from the heathen deity, Mars, by the Saxons, *Length-Moneth*, because, in this month, the days begin in length

to exceed the nights. The sun has now acquired so much power, that on a clear day we often feel all the genial influence of spring, though the naked shrubs and trees still give the landscape the comfortless appearance of winter. But soft, pleasant weather, in the month of March, is seldom of long duration.

As soon as a few dry days have made the land fit for working, the farmer goes to the plough; and, if the fair weather continue, proceeds to sowing oats and barley; though this business is seldom finished till the next month. The importance of a dry season for getting the seed early and favorably into the ground, is expressed in the old proverb,

"A bushel of March dust is worth a king's ransom."

The mellow note of the thrush, who sings perched on the naked bough of some lofty tree, is heard from the beginning of the month: at the same time, the ring-dove coos in the woods. The lesser white throat, and the chaffinch, arrive toward the end of the month. The rookery is now all in motion, with the pleasing labor of building and repairing nests; and highly amusing it is, to observe the tricks and artifices of the thievish tribe, some to defend, and others to plunder, the materials of their new habitations. These birds are accused of doing much injury to the farmer, by plucking up the young corn, and other springing vegetables; but some think this mischief fully repaid by their diligence in picking up the grubs of various insects, which, if suffered to grow to maturity, would occasion much greater damage. For this purpose, they are frequently seen following the plough, or settling in flocks on newly-turned-up lands.

"Rooks," says an intelligent observer of nature, "appear to have a language

among themselves, which is understood by the whole community; and a peculiar note, from a bird set to watch and warn them of approaching danger, is quite sufficient to make them take flight, and always in an opposite direction to that from which the danger is apprehended."

Frogs, which during winter lie in a torpid state at the bottoms of ponds or ditches, are enlivened by the warmth of spring, and early in this month rise to the surface of the water in vast numbers. They are at first very timorous, and dive to the bottom with great quickness as one approaches; but in the coupling season they become bolder, and make themselves heard to a great distance by their croaking.

Those most elegant fish, smelts or sparlings, begin to run up the rivers in this month, in order to spawn. They are of so tender a nature, that the least mixture of snow water in the river will drive them back again to the sea. But nothing in the animal creation is a more pleasing spectacle, than the sporting of the young lambs, most of which are yeaned during this month, and are trusted abroad when the weather is tolerably mild.

Another most agreeable token of the arrival of spring is, that the bees begin to venture out of their hives about the middle of this month. As their food is the honey-like juice found in the tubes of flowers, their coming abroad is a certain sign that flowers are now to be met with. No creature seems possessed of a greater power of foreseeing the state of the weather; so that their appearance in the morning may be reckoned a sure token of a fair day.

"My bees," says Mr. Jesse, "are a constant source of amusement to me; and the more I study them, the more I am led to admire their sagacity. Few things, however, surprise me more, than the power which they possess of communicating what I can only call intelligence to each other. This I observe to be almost invariably the case before they swarm. Some scouts may then be observed to leave the hive, and for sometime to hover round a particular bush, or branch of a tree; after which, they return to the hive. In a little while, the new swarm quits it and set-

tles on the branch which had been previously fixed upon by the scouts. The same power of communication may be observed in the ant. I have often put a small green caterpillar near an ant's nest; you may see it immediately seized by one of the ants, which, after several ineffectual efforts to drag it to its nest, will quit it, go up to another ant, and they will appear to hold a conversation together by means of their antennæ, after which they will return together to the caterpillar, and, by their united efforts, drag it where they wish to deposit it.

"Each crawling insect holds a rank important in the plan of Him who framed this scale of beings."

In the latter part of this month, the equinox happens, when day and night are of an equal length all over the globe; or rather, when the sun is an equal time above and below the horizon; for the morning and evening twilight make apparent day considerably longer than night. This takes place again in September. The first is called the vernal, the latter the autumnal equinox. At these times, storms and tempests are particularly frequent, whence they have always been the terror of mariners. March winds are boisterous and vehement to a proverb.

VISIONS OF GOOD MEN.

How many beautiful visions pass before the mind in a single day, when the reins are thrown loose, and fancy feels no restraints! How curious, interesting, and instructive, would be the history of a single mind for a day! How many imaginary joys, how many airy castles, pass before it, which a single jostle of this rough world, at once destroys! Who is there of my readers who has not imagined summers fairer than ever bloomed, scenery in nature more perfect than was ever combined by the pencil, abodes more beautiful than were ever bestowed, homes more peaceful than were ever enjoyed, companions more angelic than ever walked this earth, and bliss more complete, and joys more thrilling, than were ever allotted to man? You may call these the dreams of

the imagination, but they are common to the student. The man who lives for this world alone, these visions of bliss, poor as they are, are all that ever come. But good men have their anticipations—not the paintings of fancy, but the realities which faith discovers. Good men have the most vivid conceptions. Witness those of old. As they look down the vale of time, they see a star arise, the everlasting hills do bow, the valleys are raised, and the moon puts on the brightness of the sun. The deserts and the dry places gush with waters. Nature pauses. The serpent forgets his fangs; the lion and the lamb sleep side by side, and the hand of the child is on the mane of the tiger. Nations gaze till they forget the murderous work of war, and the garments rolled in blood. The whole earth is enlightened, and the star shines on till it brings in everlasting day. Here are glowing conceptions, but they are not the work of a depraved imagination. They will be all realized. Sin and death will long walk hand in hand on this earth, and their footsteps will not be entirely blotted out till the fires of the last day have melted the globe. But the head of the one is already bruised, and the sting is already taken from the other. They may long roar, but they walk in chains, and the eye of faith sees the hand that holds the chains. But we have visions still brighter. We look for new heavens and a new earth wherein dwelleth righteousness, where no sin will mar the beauty, no sorrow diminish the joy, no anxiety corrode the heart, or cloud the brow.

CHAMOIS HUNTING.



HE chamois hunter sets out upon his expedition of fatigue and danger generally in the night. His object is to find himself at the break of day, in the most elevated pastures, where the chamois comes to feed before the flocks shall have arrived

Hunting the Chamois

there. The chamois feeds only at morning and evening. When the hunter has nearly reached the spot where he expects to find his prey, he reconnoitres with a telescope. If he finds not the chamois, he mounts still higher; but if he discovers him, he endeavors to climb above him and get nearer, by passing round some ravine, or gliding behind some eminence or rock. When he is near enough to distinguish the horns of the animal (which are small, round, pointed, and bent backward like a hook, as in our engraving), he rests his rifle upon a rock, and takes his aim with great coolness. He rarely misses. This rifle is often double-barrelled. If the chamois falls, he runs to his prey, makes sure of him by cutting the ham-strings, and applies himself to consider by what way he may best regain his village. If the route is very difficult, he contents himself with skinning the chamois; but if the way is at all practicable with a load, he throws the animal over his shoulder, and bears it home to his family, undaunted by the distance he has to go, and the precipices he has to cross.

But when, as is more frequently the case, the vigilant animal perceives the hunter, he flies with the greatest swiftness into the glaciers, leaping with incredible speed over the frozen snows and pointed rocks. It is particularly difficult to approach the chamois when there are many together. While the herd graze, one of them is planted as a sentinel on the point of some rock, which commands all the avenues of their pasturage; and when he perceives an object of alarm, he makes a sharp, hissing noise, at the sound of which all the rest run toward him, to judge for themselves of the nature of the danger. If they discover a beast of prey or a hunter, the most experienced puts himself at their head, and they bound along, one after the other, into the most inaccessible places.

It is then that the labors of the hunter commence; for then, carried away by the excitement, he knows no danger. He crosses the snows, without thinking of the precipices which they may cover; he plunges into the most dangerous passes of the mountains—he climbs up, he leaps from rock to rock, without considering

how he can return. The night often finds him in the heat of the pursuit; but he does not give up for this obstacle. He considers that the chamois will stop during the darkness as well as himself, and that on the morrow he may again reach them. He passes then the night, not at the foot of a tree, nor in a cave covered with verdure, as the hunter of the plain does, but upon a naked rock, or upon a heap of rough stones, without any sort of shelter. He is alone, without fire, without light; but he takes from his bag a bit of cheese, and some of the barley-bread, which is his ordinary food—bread so hard that he is obliged to break it between two stones, or to cleave it with the axe which he always carries with him to cut steps which shall serve for his ladder up the rocks of ice. His frugal meal being soon ended, he puts a stone under his head, and is presently asleep, dreaming of the way the chamois has taken. He is awakened by the freshness of the morning air; he rises, pierced through with cold; he measures with his eye the precipices he must yet climb to reach the chamois; he drinks a little brandy (of which he always carries a small provision), throws his bag across his shoulder, and again rushes forward to encounter new dangers. These daring and persevering hunters remain whole days in the dreariest solitudes of the glaciers of Chamouni; and during this time, their families, and, above all, their unhappy wives, feel the keenest alarm for their safety.

THE MISSISSIPPI AND THE NILE.



Y the Greeks the space included within the mouths of the Nile, was called the Delta, from its resemblance to the letter (Δ) of that name. This space embraced all of that part of Egypt, from the site of ancient Memphis, or modern Cairo, to the Mediterranean sea. It was the great alluvial formation of the

Nile. It constitutes a triangle, nearly equilateral, the sides of which average about eighty miles. The whole great valley of the Nile is about nine hundred miles long, and, on an average, about six miles broad. Within this narrow space all that once was great in the world was centred. It was the kingdom of Egypt—the fountain of civilization—the mistress of the civilized world. We read of the glories of Thebes and Memphis with incredulity. Their hundred brazen gates, and the sixty thousand armed men which could at all times issue from them, though they are facts related by grave historians, from Herodotus downward, seriously tax our powers of belief. But when we remember that the chosen people of Heaven were but a race of uneducated shepherds when Egypt was a powerful, enlightened kingdom—when we gaze upon the heaven-reared, eternal pyramids, and explore the vast excavated temples—the builders of which are not known, and the date of which can not be fixed, we must acknowledge that this little river, this narrow valley, shows to mankind what man can do. To Egypt we trace all civilization; from the Egyptians we must confess that we have derived most of the arts of life. Her early history is veiled in obscurity, but her monuments stand, and will for ever, the admiration and the wonder of mankind.

The valley of the Nile, and that of the Mississippi, have often been compared, but save in their fertility, wherein do they resemble each other? The one is a long narrow strip of land, skirted by sandy deserts, depending for its yearly capacity to supply human wants upon the rise of the river—the other extends in length more than fourteen hundred miles, and in breadth from the Alleghanies to the Rocky mountains, and embraces a soil of inherent and perpetual fertility; the one is watered by a single river, without branches or tributaries; the other possesses more than eight thousand miles of navigable streams. If the people who heretofore inhabited the valley of the Nile, could construct works so stupendous, and exercise upon all succeeding time an influence so remarkable—who can say what shall be the destiny of the citizens of this great valley of the “father of waters”? What

is not in their power? who can imagine the strength which they will wield, or the glories they will achieve?

When the great Alexander had conquered the world, he was desirous of leaving to posterity some record of his fame. The shattered walls, the ruined temples, and the falling columns of the cities which he had destroyed, must shortly disappear. He wished to impress his name upon a living and enduring monument. He had the world in which to select its site, and he chose the Delta of the Nile. The city of Alexandria was at once a testimony to his power and his sagacity. Connected by a canal with the western opening of the Nile, it commanded the whole commerce of the valley—its galleys covered the Mediterranean, and a thousand caravans, traversing the deserts of Asia and Africa, poured into it the untold wealth of those extensive regions. For years it was the first city of the world; and after ages of wars, domestic revolutions, and foreign plunder, it is said that at its final conquest by the lieutenant of the calif Omar, it contained a population of 600,000.

If such was Alexandria, the capital of Egypt, the emporium of the valley of the Nile, what may not New Orleans, the natural outlet of our great valley, become? We are not dependent on caravans, traversing the deserts; we are not bounded by the narrow limits of the Mediterranean; we have not for our sole support 6,000 square miles of territory; we are not ground down by a tyrannical government; how far, then, must we surpass the proud city of Egypt in her palmiest days! What the Atlantic and Pacific are to the Mediterranean, what the Mississippi is to the Nile, what steamships are to two-banked galleys, must this emporium be to Alexandria. The prospect before us is indeed bright and cheering. The full accomplishment of the most sanguine hopes depend only upon ourselves. Nature has done everything that is necessary—it only remains for man to do his share.

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MAXIMS.—Persevere against discouragements. Employ leisure in study, and always have some work in hand. Be punctual and methodical in business, and never procrastinate.

THE PATHWAY OF SCIENCE.



WE have been reading of the wonderful properties of the electro-magnetic telegraph, and it has set our fancy afloat in the wide field of speculation. The mind soars upward and onward, awakened in all its energies, struggling, grasping, expanding, with the magnificent conceptions which are awakened in the pathway and the progress of science!

Science? what is it? where was it engendered? What are its achievements, and what are the limits which God has ascribed to its astounding developments? Did it belong to antiquity, or is it ours? Science! In the academy, in the lyceum, or the porch at Athens, shall we search for it? Will we go to the dark ages to trace its foot-prints? Those ages, with their "wonderful" and "illuminated" doctors, and their magnificent creeds. Ages which brought the hoary-headed Galileo, before the solemn convocation of the wise and learned, to pronounce upon him, through seven grave cardinals, the anathema of the church—"That to maintain the sun to be immovable and without local motion in the centre of the world, is an absurd proposition, false in philosophy, heretical in religion, and contrary to the testimony of the scripture; that it is equally false and absurd in philosophy to assert that the earth is not immoveable in the centre of the world, and, considered theologically, equally erroneous and heretical!" The dark ages, with Copernicus imprisoned by the pope to recant his "absurd dogmas"—with Faustus flying from Paris after his fatal bibles had been exposed for sale—the dark ages with the ponderous tomes of Thomas Aquinas, Abelard Duns Scotus, and Peter Lombard, piled up on groaning shelves—the science of the dark ages! We come to the Baconian era. Bacon, the genius of inductive science, is born. He defines its lines and teaches its limits. His pathway is upward—amazing truths—amazing developments!

"Earth's disemboweled! measured are the skies!
Stars are detected in the deep recess!
Creation widens! vanquished nature yields,
Her secrets are extorted! art prevails;
What monument of genius, spirit, power!"

Science has been manifesting God. Where is God in nature? The illiterate and the savage see him in the whirlwind and the storm, but in ten thousand beautiful combinations is he revealed to the scientific. The earthquake causing mountains to totter on their bases, ocean to heave her immense volumes in august majesty to the sky, and bare her profound caverns—the earthquake thundering rivers from their channels, rocking down cities, and swallowing them up in yawning abysses—these are God to trembling man universally revealed—God in his might, in his awful magnificence! But, oh, to a few only is he in the soft beauty of the landscape, the meandering stream, the rippling fountain, the cascade, the zephyr bearing on its wings Flora's balmy fragrance, the blade of grass, the pebble, the shell—God the kind and attentive parent, God the benefactor, the friend, ministering with equal hand to the great family of living existence.

*Take up the book of astronomy—*Go with the astronomer and contemplate the illimitable empire of worlds, and, like Newton, overpowered to trace the great law that connects them together. Examine your own earth, if you please. See it selecting with mathematical precision the only permanent axis out of an infinity of others on which it might have revolved. Observe the position of that axis too—perpendicular or parallel to the ecliptic, where would have been the seasons and animal life? What else would have reigned throughout this wide domain but solitude? dreary, dreadful, interminable solitude! The poet was not over-enthusiastic when he exclaimed—

"An undevout astronomer is mad!"

Contemplate with the chymist the great law of definite proportions without emotion. Trace the polarization of light, the magnet, electricity's subtle and powerful fluid pervading nature—see with the mineralogist the regular-formed and polished crystals which the great Architect has fashioned—the earth unbowed to the

geologist, its mighty mountains penetrated to trace their structure and arrangements—its fossils sought out and interpreted in evidence of rolling thousands and thousands of ages! Examine with the botanist and the anatomist organic sensibility and organic insensible nature. Everywhere and everything excites an intensity of emotion! All is great, all is wonderful, all is inexplicable! Or if mental philosophy be admitted to the dignity of science, the single discovery that the laws of association which influence memory are in themselves indestructible—that an affection of the body stimulates their action—that submitted to certain modifications the whole train of past thoughts, feelings, and affections, which now seem shrouded in the dark vista of the past, may be completely developed so that no one item of life shall be lost. This fact, if clearly established, completes the dignity of the effect, man, and the cause, God, and is a field for the exercise of deep and profound thought.

GREENWICH OBSERVATORY.



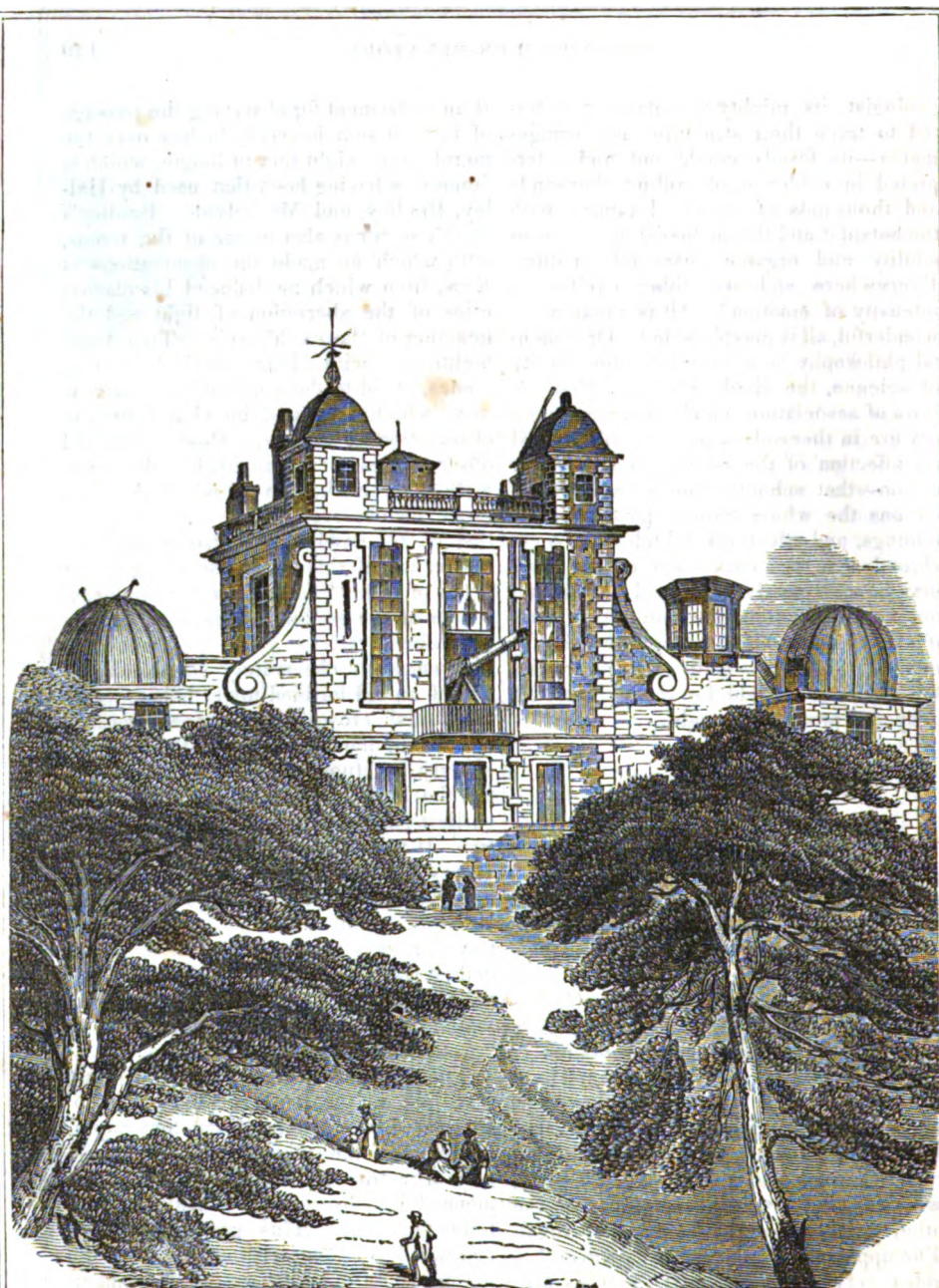
AMONG the existing institutions of this description, the observatory at Greenwich, of which a representation is annexed, has long held an eminent

place. It stands on the most elevated spot in Greenwich park, and consists of two buildings, one a low oblong edifice, which is properly the observatory, and the other a house for the astronomer royal. The upper part of the latter, however, besides serving as a library-room, is also filled with instruments; and there is a camera-obscura on the top of the house. The library contains many scarce and valuable works, principally on scientific subjects. The observatory is divided into four apartments, fitted up with transit circles, quadrants, clocks, sectors, and other astronomical instruments. Among them

is an instrument for observing the passage of the different heavenly bodies over the meridian, of eight feet in length, which is famous as having been that used by Halley, Bradley, and Maskelyne. Bradley's zenith sector is also in one of the rooms, with which he made the observations at Kew, from which he deduced his discoveries of the aberration of light and the mutation of the earth's axis. Two small buildings, with hemispherical sliding domes, stand to the north of the observatory, which are fitted up chiefly for the observation of comets. Most of the old observatories were provided with a deep well, from the bottom of which the stars might be observed in the daytime; and that of Greenwich had also formerly an excavation of this kind, descending to the depth of a hundred feet, in the southeast corner of the garden. It is now, however, arched over.

Greenwich observatory stands on the site of an old fortified tower belonging to the British crown, said to have been first erected in the early part of the fifteenth century, by Humphrey, Duke of Gloucester, the brother of Henry V., one of the earliest patrons of learning in that country. It was either repaired or rebuilt by Henry VIII. in 1526; and continued long afterward to be considered a place of some strength. Paul Hentzner, the German traveller, says that, in the time of Elizabeth, it was known by the name of "Mirefleur," and was supposed to be the same which is mentioned in the romance of "Amadis de Gaul."

The foundation-stone of the building was laid on the tenth of August, 1675. Flamsteed was appointed the first superintendent of the establishment, under the title of astronomer royal; and he commenced his observations in August of the following year. This great astronomer continued to reside at the observatory till his death, on the thirty-first of December, 1719, forty-three years after his appointment. The results of his laborious observations and calculations during the whole of this period were given to the world in 1725, in three volumes folio, under the title of "Historia Celestis," an immortal monument of his industry and genius. Flamsteed was succeeded as as-



View of the Observatory at Greenwich, England.

tronomer royal by the great Halley, who occupied the situation twenty-three years, having died in 1742, at the age of eighty-five. His successor was another most distinguished astronomer, Bradley, the discoverer of the aberration of light, or that difference between the apparent and the true place of any of the fixed stars, which is occasioned by the motion of the earth and the motion of light from the star to the observer. After Bradley's death, which took place in 1762, Mr. Bliss held the office for two years, when he died, and gave place to the late eminent Dr. Maskelyne, who enjoyed it for a period not much short of half a century, having survived till 1810. He was succeeded by the present astronomer royal, Mr. Pond. Since 1767, the observations made by the astronomer royal at Greenwich have been annually published, under the superintendence of the royal society. The admirable instruments with which the observatory is provided, together with the ability and high character of the successive astronomers, have secured to the Greenwich observations a reputation for accuracy scarcely rivalled by those of any other similar institutions.

REPRODUCTION OF PLANTS.



THE main object of a plant during growth seems to be the reproduction of its kind. Whether the term of its existence be limited by a day, by a year, or by centuries, its sole effort—as it proceeds from leaf to stem, from stem to branch, and from branch to flower and fruit—is the multiplication of itself. This is effected variously; by seeds, by spores or germs, by tubers, by runners, which put forth shoots as they elongate, by branches which send down roots, by slips or detached branches, or even by single leaves. We shall notice the more remarkable of these modes as exhibiting at once the perfection of design, and the inexhaustible contrivances

which nature has ever at her adoption for the accomplishment of the end in view.

Increase by seed is the most familiar mode of reproduction, being common to all flowering plants. Seeds are merely leaves preserved in peculiar cerements till the return of the season of growth. And here it may be remarked, that wherever we have a healthy-growing leaf, or number of leaves, there is no difficulty in rearing an independent plant, since, according to the doctrines of morphology, the leaf is the primary organ from which all other parts take their form and development. A numerous class of vegetables have their seeds composed of two leaves or lobes, as may be seen in the bean and apple; in another class, as the oat and cocoa-nut, they consist of a single lobe. But whether they have one or two lobes, in all of them the function of reproduction is of the most perfect description. To produce a fertile seed, the pollen or dusty granules which tip the stigmas must be conveyed to the pistil, and through the pistil to the embryo in the ovary. For this purpose a thousand beautiful adaptations have been called into existence. These precious granules, liable to be swept away by every breeze and shower, are protected by the sheltering calyx and corolla, which turn their backs to the wind, or droop like a pent-house to ward off the rain. And even should the pollen be scattered by accident, the pistil is covered with a fine mucilage, which intercepts and retains it in spite of every antagonist force. Some plants have the stamens and pistils in one and the same flower; in others the stigmas are in one flower and the pistil in another; while in not a few the male and female flowers are produced on separate stems—yet in all, the means of fertilization are seldom rendered nugatory. If the male and female flower are near, they are placed to be brought in contact by the slightest waving of a branch; or if distant, the passing breeze and the limbs of the wandering bee, are the agents by which the pollen is carried to the destined receptacle. When properly matured, a seed must be provided, first, with the means of dispersion and preservation, and secondly, with a sufficiency of internal nourishment for the embryo plant, till its roots

have struck into the soil, and its leaves have expanded in the atmosphere. Accordingly, some seeds are farinaceous, others albuminous, and many oleaginous—all of those products being converted, during germination, into those elements which enter into the structure of a growing plant. For the conversion of these products, a certain amount of heat and moisture is necessary; but too much heat would parch them, and too much cold or moisture would destroy their vitality. To provide against such contingencies, nature has conferred on the seeds of plants the most ingenious and perfect coverings. The cocoa has a tough fibrous coir and woody nut, impervious alike to draught and rain; the chest-nut has a compact leathery envelope; the plum a hard stony drupe; the apple a fleshy pome, enclosing leathery cells; the rose a flesh hip, packed with down; the pea and bean a pod of parchment; and seeds apparently naked have either a coriaceous membrane, or have the exterior tissue so condensed that they look as if they had come from the hand of a japaner. Thus, the protection against cold, drought, moisture, and other destructive agencies, is so complete, that seeds which have been buried for centuries, have, on being brought to the surface sprung up into healthy plants; even a crop of wheat has been reared from grain found in the case of an Egyptian mummy more than three thousand years old.

Equally perfect with this protection is the means for their dispersion over the surface of the globe. What could be better adapted for floating from island to island than the cocoa-nut, with its light, waterproof, fibrous coir, and woody shell? What more easily caught up by the slightest breath of air than the seeds of the thistle or dandelion, with their little parachutes of down? Or what more aptly fitted for attachment to the coats of wandering animals, than the hooked heads of the teasel and burdock? Nor does contrivance end here. Many when ripe, are ejected from the vessels which contain them with considerable force by means of elastic valves and springs. The cardamine impatient throws its ripe seed to a distance on being touched; so does the squirting cucumber, the geranium, the

common broom, and others, as if they were endowed with vitality, and had a care for their embryo progeny. Some do not even part with their seeds till these have struck root as independent plants. Thus the mangrove, which flourishes amid the mud of tropical deltas and creeks, retains its berries till they have sent down long thread-like radicles into the silt below, as if it felt that the water and slime by which it was surrounded were elements too unstable to be intrusted with its offspring.

Plants that reproduce themselves by spores or germs, belong to the cryptogamic or flowerless class of vegetation, as the ferns, sea-weeds, mosses, mushrooms. In many of these the reproductive spores are so minute, that they float in the air unseen; and not a dried mushroom or puff-ball that is struck by the wandering foot, but disperses thousands of its kind around it. The little brown specks on the leaf of the fern, the snuff-like powder of the puff-ball, or the dust arising from the mould of a decayed cheese, are all alike the germs of future plants; and when we consider how minute each individual is, how liable to be borne about by winds, by water, and by the coverings of animals, to which they may adhere, we shall cease to wonder at the fact, that there is not a portion of surface, organic, or inorganic, that may not be covered with their growth. The spores of the fuci, or sea-weeds, which are always surrounded by water, and covered with a mucilage that enables them to adhere to whatever solid body they touch; and, what is peculiar in this adhesive substance, it is insoluble in water. "Let chymistry," say McCulloch, in his "Illustrations of the Attributes of a God," "name another mucilage, another substance, which water can not dissolve, though apparently already in solution with water, and then ask if this extraordinary secretion was not designed for the special end attained? and whether, also, it does not afford an example of that Power which has only to will that it may produce what it desires, even by means the most improbable?"

Many plants, as the potato, reproduce themselves by both seed and tubers. Both modes, however, do not take place with equal exuberance at one and the same time. In its native region of South Amer-

ica, where the climate is better adapted for blossom and maturation of seed, the potato flowers luxuriantly, but yields an insignificant crop of small acid tubers. Acting upon the knowledge of this principle, the farmer in Europe cuts off the flower-buds of the potato-plant to increase his crop of tubers; just as the tulip or hyacinth fancier prevents his plants from flowering, in order to increase the stock of his bulbs, which throw out a number of offsets from their bases. There is, it would seem, a certain amount of vital force in every plant, and if that force be expended on flowering, tubers will not be produced, and if on the production of an underground progeny, the seed will not be matured, as is the case with the horse-radish and Jerusalem artichoke. Here, however, it must be remarked, that tubers are not roots in the botanical sense of the word; they are true underground stems, which, instead of terminating in fruit and seed, terminate in nodes full of eyes or leaf-buds, and supplied with a quantity of farinaceous matter for the support of the young buds, till they have struck their roots, in the soil sufficient to elaborate their own sustenance. Let any one unearth a potato-plant with care, and he will at once perceive the difference between the true roots spreading out into minute fibres, and the underground stems terminating in tubers. The former are tough and fibrous, diverging into minute radicles, each tipped with its little sucking point or spongiole; the latter are soft and succulent, undivided, and ending in a mass of farinaceous matter, studded with young buds. Each of these buds, if detached with a portion of the tuber, and placed in proper soil, will spring up into a perfect plant—the farinaceous fragment supplying it with food, until roots and leaves are formed.

The manner in which plants reproduce themselves *viviparously* differs according to the constitutional character of the individual. Some, as the elm and poplar, have their roots furnished with buds, which, sooner or later, sprout forth into offsets and suckers, as they are called, and these annually increase in bulk and height—ultimately becoming, under proper conditions, perfect trees. Others, as

the greater number of bulbs and tubes, multiply themselves by sending out runners, each of which produces several young plants; and herbaceous perennials extend themselves in the same way, either by runners underground, as the couch-grass, or above ground, as the strawberry. Most people must have observed the continual efforts of the latter plant to extend itself in this way; and so it is with many others—the propensity being most powerful ~~where~~ there is the least opportunity of bringing forth seed. It is often highly interesting to watch the progress of these runners. Where the soil is soft and favorable throughout, the young shoots are developed at about equal distances; but where the soil is hard, or covered with stones, the runner pushes its way over these obstructions, refusing to put forth a single bud until the proper conditions for its maintenance be reached. We have often seen a gravel-walk thus crossed by a strawberry runner, the runner being as budless as a piece of copper wire, until it had arrived at the soil on the other side, where it immediately put forth its young progeny in abundance. Instances of this kind are often ascribed to vegetable instinct; and were it not for the essential differences which evidently exist between vegetables and animals, one would be almost tempted to assign to it a higher designation. Some plants produce living seeds in the vessels where the ordinary seed is matured, as may be seen in certain species of the onion family—known as tree and apple onions; and others, like some of the lilies, yield little perfect bulbs in the axile of the stem leaves.

Another manner in which trees multiply themselves is by their branches bending downward till they touch the ground with the growing points, which then take root and spring up into independent stems. This frequently happens among trailing shrubs, as the bramble and honeysuckle, and may also be witnessed among our garden roses and gooseberries. A somewhat similar mode of extension is presented by the banyan, which becomes enlarged without the assistance of either seeds or suckers. Roots are produced by the under-side of the lower branches; these hang dangling in the air for many

months before they reach the ground ; this at last they penetrate, and become stems to a new head of branches. An old tree of this kind presents a most magnificent object, forming concentric corridors over a great extent of surface. Acting upon the principles here pointed out by nature, gardeners propagate many of their favorites by layers ; that is, by bending a branch or shoot till a portion of it be buried in the soil, where it throws out roots, and establishes itself as an independent plant. This being done, it is removed from the parent stock and placed in another situation.

Trees are also propagated by slips ; that is, by detached young shoots being thrust into the soil, where they usually throw out roots, and grow up into healthy individuals. All plants of course can not be slipped with the same facility ; but generally speaking, where there are well-developed leaf-buds in the axiles of the perfect leaves, and where there is true wood formed, the slip will be found to take root and grow. Budding is another artificial mode of propagation ; it is, in fact, merely slipping at an earlier stage of growth. In the one case there are many leaf-buds on a common stem, in the other there is only a single bud. The operation is performed by taking the leaf-bud from one tree, and neatly inserting it under the cuticle of another, where, fed by the necessary juices, it extends into a new bough or arm.

Perhaps the most curious mode of natural reproduction is that by the leaf. It is well-known, that many leaves, as those of the *echeveria*, *malaxis*, *gloxinia*, orange, and others, when fallen to the ground in a young and growing state, put forth roots and become perfect plants. This fact is at present exciting much attention ; and since all parts of a plant are but special developments of this single organ, it is argued that there is nothing to prevent the propagation of any species of vegetation by this simple means. Considering the truth and universality of the doctrines of morphology, we can not see why there should ; and feel justified in the hope, that, once gardeners have arrived at a knowledge of the proper times and modes, they shall be enabled to rear any form

of vegetation from this universal organ. What a curious view of vegetable life do the principles of reproduction unfold ! namely, that all parts of a plant, whether root, tuber, bulb, stem, branch, leaf, or seed—will under certain conditions, grow up into a perfect individual, similar to the parent from which it has sprung. All modes do not take place at the same time, for nature is never prodigally wasteful of her resources ; but where climate or other conditions interrupt production by one source, another is developed more exuberantly than usual to supply its place. If we have not conditions to mature fruit and seed, there will be tubers, or suckers, or runners instead ; and just as the chances of failure are great, so are the modes of reproduction proportionally increased. There is nothing corresponding to this in the animal kingdom, unless among the very lowest forms, as the polyps and sponges, which also increase by division. Lop away a branch from a tree, and its place may be supplied by another ; break off the limb of a crab or insect, and another limb will shortly take its place ; but while the detached branch will spring up into a tree similar to its parent, all vitality has fled from the separated limb of the crustacean. Higher animals than insects and crustaceans have no power to reproduce lost parts ; but while devoid of this vegetative-like power, they have a more exalted sentient development ; and if denied the power to reproduce a lost limb, they are endowed with faculties which can better protect them.

THE EARTH.—The surface of the earth is 196,862,266 square miles, and its solidity 257,726,934,416 cubic miles. Not more than one fifth of the whole earth is habitable by man. The mean depth of the ocean is about three miles, and the mean height of mountains above the level of the ocean is one and three fourths miles.

Distribute this land over the bottom of the ocean, and the waters would immediately rise to such a height as to cover the whole face of the earth. The mean annual temperature of the earth is fifty degrees.



Portrait of Sebastian Cabot.

SEBASTIAN CABOT.



IN 1497, John Cabot, and his son Sebastian, from Bristol (England), arrived at Newfoundland, or, more probably Labrador; but no intimation is afforded of his having sailed to any distance along the coast.

In 1498, however, his son Sebastian, with two vessels, made an extensive survey, beginning in the latitude of 56 degrees, and terminating, it is said, in that of the straits of Gibraltar, or about 36 degrees. This must have brought him to the mouth of the Chesapeake, or even of Albemarle sound; and it is impossible not to regret that no details should be extant of this memorable voyage. He soon after sought the service of the Spanish monarch, and was created a member of the council of the Indies. In 1517, he is again found employed, though only as second to Sir

Thomas Pert, in an expedition from England, by which the exploration of Hudson's bay was certainly effected, though not actively followed up. Returning to Spain, he was promoted to the rank of chief pilot of that kingdom, and sailing under its flag, made the important discovery of the Rio de la Plata. Lastly, at an advanced age, being again in England, he was nominated grand pilot, and governor of the company of merchant-adventurers, in which capacity he drew up instructions for Sir Hugh Willoughby's noble eastern expedition. He appears to have ranked second to Columbus among the navigators of that age, superior in science, and rivaling him in enterprise, gallantry, and honorable feeling.

IF a seaman should put about every time he encountered a head wind, it would be impossible for him ever to make a voyage. So the person who permits himself to be baffled by adverse circumstances, will never make the voyage of life.

RESUSCITATION.



THE purpose of respiration is to expose the portion of the blood which has returned to the heart, after it has circulated through the body, and which has acquired during that circulation the properties of dark or venous blood, to the influence of atmospheric air in the lungs. The oxygenous portion of the air so received into the lungs converts this venous blood into florid or arterial blood; that is, into a state for being again circulated through all parts of the system. Any interruption to this process—by submersion in water, exposure to choke-damp, strangulation, and the like—if continued beyond a few minutes, is destructive of life. Recovery is, however, possible within certain limits; hence the resuscitative appliances to cases of “suspended animation.”

The restoratives generally resorted to are warmth, friction, electricity, and, above all, supplying of the lungs with fresh or properly oxygenated air, either by free exposure to an external current, or by artificial injection. The cause of the latter appliance is sufficiently obvious, as the cessation of the heart's action, technically called *asphyxia*, is occasioned by the interruption of respiration, or rather by the interruption of the effect produced by that function on the blood. Any means, therefore, that can restore the process of respiration, or otherwise supply its place, till the action of the heart has been established, must be of value in resuscitation, and especially so where they can be applied with ease and rapidity. Various apparatus have been invented for the injection of common air; but as this fluid contains only about twenty parts in the hundred of pure oxygen, its effect upon the blood in the lungs can not be so rapid as that of a mixture containing a greater proportion, and still less so than oxygen itself. This gas has accordingly been long recommended; but the difficulty of obtaining it with sufficient rapidity has hitherto proved a barrier to its application. A new mode has, however, been proposed

by Dr. George Wilson, of Edinburgh, by which an unlimited supply can be obtained and administered in a few minutes, and it is to this that we would direct more general attention.

It has been some time known that the chlorate of potass, if mixed with a metallic oxyde—such as the peroxyde of iron, or the black oxyde of manganese—and heated to redness, will give off oxygen in a copious stream, and without any interruption, so long as there is any of that gas in the compound. The proportion of the metallic oxyde to the chlorate, is a matter of difference among chymists; but Dr. Wilson has found by repeated experiment that about one of the former to five of the latter is the most advantageous. We were recently invited to witness in his chymical class-room an exhibition of the apparatus by which he proposes to administer the gas, and which, in the opinion of medical men, is likely to prove efficacious. In this case the supply was on a limited scale only—some 600 or 800 cubic inches in four minutes—but from the rapidity and certainty with which the gas was produced and administered to a fictitious patient, it left the most favorable impression upon the minds of the spectators. A glass retort containing four or six ounces of the mixture, was heated with a spirit-lamp, and in a few seconds the gas began to be evolved, the evolution increasing in rapidity, till at the second minute it flowed over in a continuous stream, and was conveyed into an ordinary telescope gasometer. From this reservoir it was extracted by means of injection bellows fitted with flexible tubes, and then conveyed to the lungs of the supposed patient. This contrivance was next abandoned, and the head of the patient placed in an air-tight box, into which the gas was conveyed from the gasometer. This box was fitted with a glass-slip for watching the changes produced on the countenance of the patient; and the necessary inspirations and expirations were caused by external pressure on the chest, as is done in ordinary cases of administering atmospheric air. Indeed several methods of applying the gas were suggested; but to these we need not advert, as the great merit of the proposal consists in the rapidity with

which the supply can be produced and administered. On this head we think Dr. Wilson deserving of the thanks of the public, and especially for the pains he has taken in laying it before the medical faculty, the directors of humane societies, and others capable of making the application. Of the individuals who are asphyxiated by submersion, exposure to choke-damp, &c., only a small percentage are resuscitated by the appliances at present in use; but there is every reason to conclude, that if a supply of oxygen were obtained by the means above proposed, and kept in readiness at the offices of humane societies and otherwise, the recoveries would be trebled, or even quadrupled. It is agreed on all hands that pure oxygen is more efficacious in asphyxia than common air; and certainly no plan could be more rapid or more economical than that proposed by Dr. Wilson.

THE PERSPIRATORY TUBES OF THE SKIN.

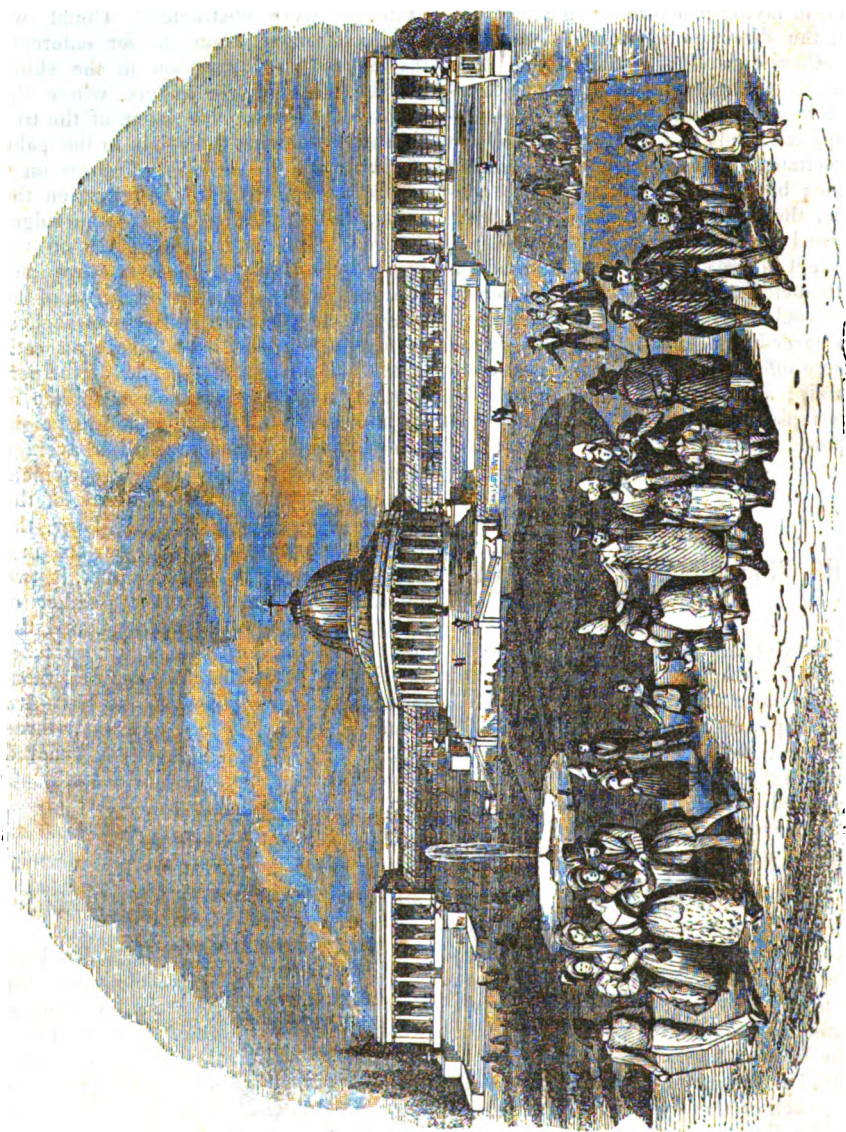
TAKEN separately the little perspiratory tube, with its appended gland, is calculated to awaken in the mind very little idea of the importance of the system to which it belongs; but when the vast number of similar organs composing this system is considered, we are led to form some notion, however imperfect, of their probable influence on the health and comfort of the individual. We use the words "imperfect notion" advisedly, for the reality surpasses imagination and almost belief. To arrive at something like an estimate of the value of the perspiratory system in relation to the rest of the organization, we counted the perspiratory pores on the palm of the hand, and found three thousand five hundred and twenty-eight in a square inch. Now, each of these pores being the aperture of a little tube of about a quarter of an inch long, it follows that in a square inch of skin on the palm of the hand, there exists a length of tube equal to eight hundred and eighty-two inches, or seventy-three feet and a half. Surely such an amount of drainage as seventy-three feet

in every square inch of skin, assuming this to be the average for the whole body, is something wonderful, and the thought naturally intrudes itself, what if this drainage were obstructed? Could we need a stronger argument for enforcing the necessity of attention to the skin? On the pulps of the fingers, where the ridges of the sensitive layer of the true skin are somewhat finer than in the palm of the hand, the number of pores on a square inch little exceeded that on the palm; and on the heel, where the ridges are coarse, the number of pores on the square inch was two thousand two hundred and sixty-eight, and the length of the tube five hundred and sixty-seven inches, or forty-seven feet. To obtain an estimate of the length of the tube of the perspiratory system of the whole surface of the body, we think that two thousand eight hundred might be taken as a fair average of the number of pores in the square inch, and seven hundred, consequently, of the number of inches in length. Now, the number of square inches of surface in a man of ordinary height and bulk, is two thousand five hundred; the number of pores, therefore, seven millions, and the number of inches of perspiratory tube, one million seven hundred and fifty thousand; that is, one hundred and forty-five thousand, eight hundred and thirty-three feet, or forty-eight thousand six hundred yards, or nearly twenty-eight miles.

BOTANIC GARDEN AT BRUSSELS.



RUSSELS has long been celebrated for its "Jardin Botanique." It occupies the side of a hill which slopes upward from the Boulevard Botanique, on the northern rampart of the city. It is about half a mile long, by a quarter broad, and now contains a range of hothouses, four hundred feet long, ornamented with a rotunda and porticoes, and has an extensive collection of plants.



Jardin Botanique, Brussels.

The roof of the houses is formed of curvilinear iron bars, and the whole is heated by steam. The principal range of hothouses is shown in our engraving. It is on the terrace, having several fountains and broad flights of steps in front of it. The plants are labelled with their common and scientific names, and in some cases with the names of their countries. Opposite to the hothouses are the herbaceous grounds, laid out in a circular manner, and divided into small compartments for the Linnæan classification. The grounds generally are laid out in walks, and beds of well-cultivated native plants, intermingled with parterres of the more gaudy exotic races. They are also adorned with ponds and cisterns for aquatic vegetation, and at the west end is a small arboretum. In front of the hothouses is a "parade," furnished with seats; Brussels is seen from it with great advantage.

The gardens are open to the public three times a week, on Tuesdays, Thursdays, and Saturdays, from ten o'clock till three. They are open every day for students and foreigners. The society to whom this young but liberally and excellently managed institution belongs, is composed of natives and foreigners; they have half-yearly exhibitions at the rotunda, which is at the back of the central conservatory.

PIASAU ROCK.



PIASAU, or Pi-as-sau Rock, so called from a remarkable legend connected with it, is situated on the northern confines of the city of Alton, immediate on the Mississippi, from the surface of which it rises to a height of nearly one hundred feet, including a receding base of broken and shelving rock, extending about thirty feet from the water's edge, and about the same distance in height. Its summit is sparsely studded with dwarf cedars, and it presents a craggy and jagged front, with the exception of a space of about fifty feet

by forty, which is smooth and even. On this space is emblazoned the figure of a hybridous animal, having a head resembling that of a fox, from which protrude large horns or antlers; its back is supplied with wings, and it has a long curling tail, and four feet, or rather, four huge claws. The sketch of the figure is very rough, and evidently executed by no master hand. It seems to have been first drawn with a species of red paint, and afterward rubbed over and polished with lime, or some other white substance. Immediately in the rear is another figure, but so obliterated by time, and by being marked over with names of ambitious visitors (who have taken this only available method of making themselves known to fame), that it is impossible to trace its outline; it is probable, however, from the few marks visible, that it was intended to represent an animal similar to the former, but in a different position. The figure, which remains entire, is about eight feet long, and five in height, to the tip of the wing which is thrown upward over the back. The Piasau rock is the lower extremity of the bluffs, which, commencing at Alton, extend northward up the Mississippi river. It has been marked as we have described, "from the time whereof the memory of man runneth not to the contrary;" and what is most remarkable, the tradition connected with it, is not confined to a few tribes of Indians only, but seems to exist among all the aboriginal inhabitants of the great west, none of whom even to this day, pass the rock without discharging their arrows or rifles at the figure, upon and around which, are innumerable marks of balls and other missiles.

The legend, as we have heard it, is as follows: The numerous and powerful nation, called the Illinois, formerly inhabited the state which now bears their name, over the greater portion of which their hunting grounds extended. For very many years they continued to increase in numbers and prosperity, and were deemed the bravest and most warlike of all the tribes of the Great Valley. At length, in the most populous district of their country, near the residence of their greatest chief, there appeared an enormous animal, part beast, part bird, which took up its

abode on the rock, and banqueted daily upon numbers of the people, whom it bore off in its immense talons. It was covered with scales of every possible color, and had a large tail, with a blow of which it could shake the earth; from its head, which was like the head of a fox with the beak of an eagle, projected immense horns, and its four feet were armed with powerful claws, in each of which it could carry a buffalo. The flapping of its enormous wings was like the roar of thunder; and when it dived into the river, it threw the waves far upon the land. To this animal they gave the name of the "Bird of the Pi-as-sau," or the bird of the evil spirit. In vain did the "medicine men" use all their powers to drive away this fearful visitor. Day by day the number of their tribe diminished, to feed his insatiate appetite. At last the young chief of the nation, Wassatogo, who was beloved by his people, and esteemed as their bravest and best warrior, called a council of the priests, in a secret cave, where, after fasting for many days, they slept, and the Great Spirit came to the young chief in his sleep, and told him the only way to rid his people of their destroyer, was to offer himself as a sacrifice. Wassatogo started up with joy, and aroused the slumbering priests, informed them what had occurred to him, and of his determination to make the sacrifice required. He then assembled the tribe, and made a speech—recounting his deeds of valor, acquainting them of his dream, and exhorting them, like him, to be ever ready to die for their people. Wassatogo then dressed himself in his chieftain's garb, put on his war-paint, as if going to battle, and taking his bow, arrows, and tomahawk, he placed himself on a prominent point of the rock, to await the coming of the monster bird. Meanwhile, as he had been directed in his vision, a band of his best braves had been concealed in the interstices of the rock, each with his arrow drawn to the head, waiting the moment when their chief should be attacked, to wreak their last vengeance on their enemy. High and erect the bold Wassatogo stood, chanting his death dirge, with a calm and placid countenance, when suddenly there came a roar as of awful thunder, and in an in-

stant the bird of the Pi-as-sau, uttering a wild scream that shook the hills, darted upon and seized the chieftain in his talons; at that moment Wassatogo dealt it a blow in the head with his tomahawk, and his braves let fly their arrows from the ambush, and the unwieldy carcass of the bird rolled down the cliff, while the chieftain remained unhurt. The tribe now gave way to the wildest joy, and held a great feast in honor of the event, and to commemorate it, painted the figure of the bird, on the side of the rock on whose summit Wassatogo had stood, and there it has endured for ages, a mark for the arrow or bullet of every red man, who has since passed it, in descending the great father of waters.

Every people have had their traditions of monsters and strangely-formed destructive animals. The ancient Greeks and Romans had their stories of centaurs and of hydras; the Moors and Egyptians, their tales of anthropophagi and various other hideous creatures; and even the English have transmitted a legend of the winged dragon vanquished by St. George. Historians have traced the probable causes, and reconciled to nature the fables of the monsters of antiquity by allowing largely for the workings of the imagination, among a semi-barbarous people. It may be, that the tradition of the Pi-as-sau bird is not without a foundation in truth. when we reflect on it, in connexion with the enormous fossil remains found in various places in the west, and allow for the imperfect skill of the limners who sketched its portrait, and for the natural love for the marvellous in man, as well as for the additions made by the fancy of the rude savages who have perpetuated it in oral lore; and, taking these considerations together with the resemblance of many parts of the animals of tradition, to the skeletons of the mammoth, the mastodon, and the mis-sourium, it would be no uneasy or unreasonable task, to believe that some one of those animals formed the basis on which the imagination of the savage has erected his legend of the bird of the Pi-as-sau. In connexion with this subject, and with a view of throwing out a hint that may be useful to others, we make a few extracts concerning bones that have been found at

different periods and places. Dr. William Goforth, of Cincinnati, in a letter to Thomas Jefferson, dated in December, 1806, in describing some bones taken by him from Big-bone Lick, Kentucky, says: "The bones of one paw nearly filled a flour barrel; it had four claws, and when the bones were regularly placed together, measured from the osalists to the end of either middle claw, five feet two inches. The bones of this paw were similar to those of a bear's foot. Where I found these bones, I found large quantities of bear's bones at the same time, and had an opportunity of arranging and comparing the bones together, and the similarity was striking in every particular, except the size. The vertebræ of the back and neck, when arranged in order with the os sacrum and coccygis, measured nearly sixty feet, allowing for cartilages; though I am not confident the bones all belonged to one animal, and the number of vertebræ I can not recollect. I had some thigh bones of incognita of a monstrous size, when compared with any other animal," &c.

In 1839, Mr. Albert Koch, proprietor of the St. Louis Museum, procured a large quantity of bones, from the vicinity of the Sulphur springs, on Little Rock creek, in Jefferson county, Missouri, about twenty-two miles south of St. Louis. To a skeleton formed of some of these bones, he gave the name of Koch's Missouriium. This animal had a trunk, and enormous tusks and claws, and was much larger than the Mastodon. Among the bones found by Mr. Koch, was the "head of an undescribed animal from which it appears that it exceeded the elephant from four to six times."

The tradition of the Indians certainly bears strong affinity to the existence of those immense animals, which have left us no trace of their being, except their bones. What an extensive scheme for conjecture and research, do they afford to the antiquarian, the naturalist, and the philosopher!

REMEMBER that labor is indispensable to excellence. This is an incontrovertible truth, although vanity can not be brought to believe, or indolence be made to heed it.

THE KINKAJOU.



F Solitary and re-cluse habits, this animal for the most part, lives among the branches of the trees in large forests, and is in every respect well adapted for climbing; being, however, decidedly nocturnal, it is but little exposed to the observation even of those who sojourn among the places frequented by it. During the day it sleeps in its retreat, rolled up like a ball, and, if roused, appears torpid and inactive. As soon, however, as the dusk of evening sets in, it is fully awake, and is all activity, displaying the utmost restlessness and address, climbing from branch to branch in quest of food, and using its prehensile tail to assist itself in its manœuvres. Few mammalia are more incommoded by light than the kinkajou; the pupils of the eyes contract to a mere round point, even when the rays of the sun have not been very bright, while the animal at the same time testifies by its actions its aversion to the unwelcome glare.

In size the kinkajou is equal to a full-grown cat, but its limbs are much stouter and more muscular, and its body more firmly built. In walking, the sole of the foot is applied fairly to the ground, as in the case of the badger. Its claws are strong and curved, the toes on each foot being five. The ears are short and rounded. The fur is full, but not long, and very closely set. The kinkajou was not unknown to Buffon, who, however, for a long time confounded it with the glutton, nor was he aware of his error until an opportunity occurred of his seeing two of these animals. One was exhibited at St. Germain in 1773, under the title of "an animal unknown to naturalists." The other was in the possession of a gentleman in Paris, who brought it from New Spain. This latter individual was suffered to go at large, being perfectly tame; and, after rambling about all night, would return to its accustomed sleeping-place, where it was always to be found in the morning. Without being docile, it is familiar, but



The Kinkajou.

only recognises its master, and will follow him. It drinks every fluid—water, coffee, milk, wine, and even brandy, if sweetened with sugar, with which latter it will become intoxicated; but it is ill for several days afterward. It eats, with the same indifference, bread, meat, pulse, roots, and especially fruits. It is passionately fond of scents, and eagerly devours sugar and sweetmeats.

DESCRIPTION OF TEXAS.



THE state of Texas is now divided into thirty-five counties, viz., Galveston, Harris, Brazoria, Matagorda, Victoria, Gou-rates, San Patrucia, Refugio, Goliad, Milan, Jackson, Bexar, Bastróp, Travis, Fayette, Colorado, Austin, Fort Bend, Washington, Robertson, Montgomery (the giant county), Liberty, Jefferson, Jasper, Houston, Sabine, Nacogdoches, Rusk, San Augustine, Shelby (more familiarly known as *state of Tumaha*), Harrison, Bowie, Red River, Fanning, and Lamar.

Of these, Montgomery is the most populous of the interior counties, and Galveston the most populous of those situated on the coast. Galveston is the largest city of Texas, though Houston, perhaps, contains about the same number of inhabitants. The next city of importance is San Augustine, in which are located the Washington college, with about one hundred and forty students, and a seminary, with from sixty to seventy-five. It has a population of about fifteen hundred.

Austin, the seat of government, in Travis county, at the foot of the San Saba mountains, and figuratively called the "City of the seven hills," is beautifully situated on the Colorado, in one of the most picturesque and romantic portions of Texas. It has a population of twelve or fifteen hundred, and is rapidly increasing. The new constitution provides that the seat of government shall continue at Austin until 1850, when, should the state be

divided in the meantime, the probability is that it will be removed further east.

San Antonio de Bexar, near the extreme western frontier of Texas, on the San Antonio river, is the oldest and best built town in Texas. It was settled about two hundred years ago, under the auspices of an association of Spanish monks, and at one time contained about fifteen thousand inhabitants. But it has several times been nearly depopulated within the last century by the attacks from the Camanche Indians, it never having been adequately defended by its inhabitants, or the Spanish and Mexican governments, nor until its partial occupation by Texan or American citizens. The town is built entirely of stone, and now contains a population of about fifteen hundred, principally Mexican.

The Alama, a dismantled fortress, the memorable scene of the lamented fate of Travis, Bowie, and Crockett, is situated on the east bank of the San Antonio river, opposite the town, and contains within its walls a church in a partial state of preservation. There is also in the city a large catholic cathedral, used by the Mexicans as a place of worship. This, like all the churches in the vicinity, of which there are five, are built in an ancient style of architecture, and give to the stranger the impression that he is wandering amid the Castilian edifices of old Spain.

There are two large public squares in the city of San Antonio, one called the Military square, intended for military occupation, and the other the Civil square, containing the public buildings of the municipal authorities.

About five miles above the city are the sources of the San Antonio river. These consist of four "fountains," or springs, the largest covering nearly an acre, and the others smaller in size. The water of these fountains is so transparent that a ten-cent piece may be seen at the depth of forty feet. The outlets to these fountains unite a short distance below, and at a point about three miles above the city, a dam of solid masonry is thrown across the stream, and aqueducts are thence constructed, on either side of the river, to convey the water from the main reservoir to the houses and gardens of the city and

the plantations below. These aqueducts were constructed perhaps a century and a half ago, by the catholic establishment; and under the regulations then established, the proprietor of each hacienda was, as is said, permitted to use the water for irrigating his entire plantation as often as required, and in quantities proportioned to the extent of his possessions.

There are three old catholic missionary establishments in the vicinity of San Antonio, situate on the river below the city, at intervals of a few miles. These, Conception, San Jose, and San Juan, are each a church, surrounded by a wall intended for purposes of defence. Within these walls are also erected numerous small buildings for the shelter and protection of the neighboring farmers, and their families during the predatory visits of the Indians.

It is a curious fact, that in a city like San Antonio, with the improvements described, its antique churches and other public edifices, should have existed for centuries, comparatively unknown, near the extreme western frontier of this now infant republic of the wilderness.

The other principal towns of Texas, are Matagorda, at the mouth of the Colorado, on Matagorda bay; Washington, on the Brazos; Corpus Christi, just sprung into existence, and numbering about 2,000 besides the United States army, of near 5,000, making in all a population of 7,000; Nacogdoches, Brazoria, on the Brazos river, and Montgomery, the capital of the county of the same name.

Cotton is principally raised, and to best advantage, on the Colorado, Brazos, Trinity, and Red rivers; but is also profitably cultivated in other sections. The sugar region is near the coast, and lying south of latitude 30°. Wheat, and the fine grains, are raised to most advantage in the mountains and hilly regions of the upper Colorado, Brazos, and Trinity rivers. Of the wilderness region above this point, toward Santa Fe, but little comparatively is known.

The principal streams are the Red river, navigable within Texas about 500 miles; the Sabine, navigable four months in the year about 400 miles; the Neches, for the same period, about 150 miles; the

Trinity, for seven months, about 600 miles; the Buffalo Bayou, navigated by steamboats every day in the year, from Houston to Galveston, about 100 miles, and the greatest thoroughfare of the country; the Brazos, four months in the year, 150 miles, and may be easily rendered navigable 300 miles; the Colorado, which by removing the raft at its mouth, may be navigated at least 400 miles; the Guadalupe, navigable about fifty miles; the Nueces, about 100 miles; and the Rio Bravo del Norte, about 600 miles.

BASS ROCK.



BASS Rock is one of the first objects seen in crossing the Scottish border by Berwick. This remarkable rock in the sea, lies at the mouth of the Frith of Forth, at the distance of a mile and a half from the coast of East Lothian. It is about a mile in circumference, and not much more than 400 feet above the level of the sea, but looks considerably higher. The water that washes its precipitous sides is from 30 to 40 fathoms deep. The rock can be approached in safety only in fine weather; and its stark, rugged cliffs, are only accessible by one narrow passage that faces the mainland. Close by this only landing-place is a castle, now in ruins, but once a place of great strength and some importance in history, consisting of four square towers and connecting works. During the war of religion between Charles II. and the covenanters, this castle was converted into a state-prison, and became the solitary residence of many west-country whigs and recusants. When the dynasty of the Stuarts was driven from the throne of the United Kingdom, the Bass Rock was occupied by a brave garrison devoted to that ill-fated family, who obstinately defended it for several years, and gained for the place the dubious honor, of its being the last spot



View of the Base Rock.

of British ground to yield to the improved and more constitutional government introduced by the revolution of 1688. Besides the castle there seems once to have been a hermitage and some other habitations on this rock; but soldiers, monks, prisoners, and peasants, have all been long gone; and now the only inhabitants of the Bass, are immense flocks of Solan geese, and some score of sheep, that contrive to climb up its precipitous sides and find pasture on its summit.

The base of the rock is perforated completely through from east to west, by a natural cavern fearfully dark in the centre, and through which the sea frequently dashes and roars with astounding violence, but which may be examined at low water on a calm day. When the tide is out, the water remaining in this curious fissure, at a few yards from its mouth, is not more than knee-deep. The young fishermen often go through it, though its aspect is exceedingly terrific. At one of the entrances to this cavern it appears as if the Bass were composed of two immense rocks, the larger of which leans diagonally against the smaller, leaving this narrow chasm between them at the bottom, but closely joining with each other at all other points. There are several other caverns of considerable length, the openings into which resemble fretted gothic windows or doors that have been made to deviate from the perpendicular by time or violence. The pencil of an able artist alone could convey an idea of their singularity and beauty.

INCIDENTS IN THE HISTORY OF WASHINGTON.



WE are all familiar with the fact, as declared by an Indian chief on the treaty ground, that he had three times taken deliberate aim (during the battle which ended in the defeat of Braddock), at Washington, then com-

manding the provincials, and missed every time. The following anecdotes relating to the same individual are not so generally known:—

Col. Ferguson of the British army, who lay with part of his riflemen on the skirts of a wood in front of Gen. Knyphausen's division, writing to his brother Dr. A. Ferguson, the day after the battle at Brandywine creek, states "we had not lain long, when a rebel officer, remarkable by a hussar dress, passed toward our army, within a hundred yards of my right flank, not perceiving us. He was followed by another dressed in dark and blue, mounted on a good bay horse, with a remarkably large high cocked hat. I ordered three good shots to steal near to them and fire at them, but the idea disgusted me; and I recalled the order. The hussar in returning made a circuit, but the other passed within a hundred yards of us; upon which I advanced from the wood toward him. Upon my calling he stopped, but after looking at me, proceeded. I again drew his attention, and made a sign to him to stop, levelling my piece at him; but he slowly continued his way. As I was within that distance at which, in the quickest firing, I could have lodged half a dozen balls in or about him, before he was out of my reach, I had only to determine, but it was not pleasant to fire at the back of an unoffending individual, who was acquitting himself very coolly of his duty; so I let him alone. The day after, I had been telling this to some wounded officers who lay in the same room with me, when one of our surgeons, who had been dressing the wounded rebel officers, came in and told us, that they had been informing him, that Gen. Washington was all the morning with the light troops, and only attended by a French officer in a hussar dress, he himself dressed and mounted in every point as above described. I am not sorry that I did not know at the time who it was."

Immediately after the organization of the present government, General Washington repaired to Fredericksburg, to pay his humble duty to his mother, preparatory to his departure to New York. An affecting scene ensued. The son feelingly remarked the ravages which a lingering

disease had made upon the aged frame of his parent, and thus addressed her :—

"The people, mother, have been pleased, with the most flattering unanimity to elect me to the chief magistracy of the United States, but, before I can assume the functions of that office, I have come to bid you an affectionate farewell. So soon as the public business, which must necessarily be encountered in arranging a new government, can be disposed of, I shall hasten to Virginia, and—"

Here the matron interrupted him : "You will see me no more. My great age, and the disease that is fast approaching my vitals, warn me that I shall not be long in this world. I trust I am somewhat prepared for a better. But go, George, fulfil the high destinies which Heaven appears to assign you ; go, my son, and may that Heaven's and your mother's blessing be with you always."

The president was deeply affected. His head rested upon the shoulder of his parent, whose aged arm feebly yet fondly encircled his neck. That brow on which fame had wreathed the greatest laurel virtue ever gave to created man, relaxed from its lofty bearing. That look which could have awed a Roman senate, in its Fabrician day, was bent in filial tenderness upon the timeworn features of this venerated matron.

The great man wept. A thousand recollections crowded upon his mind, as memory, retracing scenes long past, carried him back to his paternal mansion, and the days of his youth ; and there the centre of attraction was his mother, whose care, instruction, and discipline, had prepared him to reach the topmost height of laudable ambition ; yet how were his glories forgotten while he gazed upon her from whom, wasted by time and malady, he must soon part to meet no more on earth !

The matron's predictions were true. The disease which had so long preyed upon her frame completed its triumph, and she expired at the age of 85, confiding in the promises of immortality to the humble believer.

St. Paul exhorts to pray without ceasing—habitual piety is ceaseless prayer.

THE WHALE, AND WHALE-CATCHING.



IN giving a description of the whale, we must necessarily repeat much that has been written by others ; but one who has seen them, in their native element, and has often met them in all their terrors, can at least

strip his description of the exaggeration in which most writers have indulged.

The whale may be properly divided into two genera : the bone whale and the sperm whale. I prefer this description to the scientific one usually given, as it will more definitely mark the difference of these animals than classic words, to which we attach little meaning. The bone whales are of several species, all agreeing in general habits and character, but each having some distinct characteristic. The first and most important is the black whale, or, as the Americans call him, the *right whale*. This animal is usually about fifty-six feet in length, the largest may reach to sixty feet. Their color is black on the back, and white on the centre of the belly. Occasionally he is spotted with white. The head of this creature is about one third of his whole length. The eyes are placed upon the sides of the head, near the body, and from its great size, it is consequently unable to see either directly forward or behind it, so that it may be approached very near, without being alarmed. But the most singular part of the animal is its mouth, and its adaptation for collecting the food upon which it lives. The upper jaw opens at least fifteen feet in length, and is provided with over five hundred laminæ, or slabs of thin black bone, which are hairy on the inner side, and when seen without, have the appearance of a Venetian blind, placed perpendicularly. The under jaw is broad, and when closed receives the ends of this bone upon its soft gums. It is also provided with two immense lips, one on each side, which are large enough to close the whole mouth and cover the bone. Some idea of these lips may be formed, when we know that the longest bone, is fourteen feet in length, and the largest lip will



Harpooning the Whale in the Arctic Sea.

make three barrels of oil. The body is from forty to fifty feet in circumference, and has two fins just behind the head, in which whalemén, owing to the peculiar situation of the bones, trace a fanciful resemblance to the human hand and fingers. The use of the fins appears to be to direct their course, and not to assist them in swimming. The body is thick for the greater part of its length, but it tapers near the end, and finishes in a tail, or as it is usually called, in flukes. These flukes are from twelve to fifteen feet in breadth, and in them is placed the animal's means of offence and defence. With its flukes it strikes blows which may be heard at the distance of miles, and from their force, one would suppose that nothing could sustain them, but we find that, in their contests with each other, they seldom or never produce death.

This whale feeds upon the animalculæ of the ocean, more particularly upon a very minute species of shrimp, by the whalemén called britt, which is found without the tropics, both in the northern and southern oceans. This is obtained by swimming with its mouth partly opened, until a sufficient quantity is collected and retained by the hairy bone of the upper jaw, when the lips are closed, and by means of its tongue this small food is collected and swallowed. Its manner of feeding would remind you of the grazing of the ox—the same disproportion between the size of its food and the animal to be supported. But when we reflect upon the fact that the ocean is teeming with life, and remember the immense net-like mouth of the whale, we shall at once see that the end is not disproportioned to the means. Like the ox too, this animal feeds industriously for a few hours, and then either rises above the surface and sleeps, or exercises itself in awkward gambols. If playful, it beats the water with its flukes, or sinks to the depths of the ocean, and ascends with such velocity that it throws its whole body out of the water. It can not remain long under the water at one time, but must ascend for respiration. Its usual time of breathing is once in fifteen minutes. It has two orifices on the top of the head which answer for nostrils, and when it throws out its

breath it is detected by the spray or steam which it throws up; owing to this, it becomes the prey of the whalemén. This animal is sought for its oil and bone.

The other species of bone whale are the humpbacked whale, the finback, and a species called the sulphur-bottom, by American whalemén (perhaps answering to the razor-back of the English). The humpback is killed for his oil, but his bone is small and of no value; he differs from the black whale in having a large hump on the back, and in his fins, which are at least fifteen feet in length, with which he strikes severe blows, and will readily destroy a boat. The finback whale is ninety feet in length, being much longer than either of the others; is distinguished from them by throwing his spout much higher, and by having a fin on the top of his back, and never lifting his flukes out of the water. He is also much fleetier than the black or humpbacked whales. For while they usually move but three or four miles an hour, and when excited can only for a short time accelerate their motion to ten or twelve miles, and must then stop and rest, the finback can readily move at the rate of twenty miles an hour (at the least), and will continue that rate for a length of time, that render all attempts to take him unavailing. The last and largest of the whale species, is the sulphur-bottom or razor-back whale. They have been met with at the estimated length of one hundred and thirty feet, they differ little in appearance from the finback, except that the back fin is nearer the tail, and their motion is much slower, seldom exceeding five miles an hour. They feed in the same manner as the black whale, and like them are killed for their oil. All the species of bone whale are alike in their habits, being all timid and cowardly, trusting to flight when attacked, and never if they can avoid it, defending themselves by injuring others.

The bone whales have but one known enemy except man. This is a fish called by whalemén "the killer," about twenty feet long, rather large in the body, and armed with strong teeth, which attacks the bone whale for the sake of his tongue. He first fastens upon the blow-holes or nostrils of the whale until he is forced to

open his mouth to breathe, which then entering, he fastens upon the tongue and devours it, thus killing this immense animal, which would appear from its bulk to be safe from the attack of all minor creatures.

The sperm whale differs from the bone whale in its feeding. The food of the sperm whale is a species of animated vegetable, called squid, usually found in deep water. As this substance has much consistency, the whale is provided with thirty-six large teeth on the under jaw, with which it rends its food from the rocks to which it is attached. The head of the sperm whale is square at the end, and seems unfit for rapid motion, but it is so hard that it is unaffected by collision with hard substances, and one means of offence with this animal is to strike with the head. Its head is not only one third the length of the body, but contains one third of the oily matter of the whole creature; its upper jaw is frequently fourteen feet in thickness. Its upper surface of about six or eight feet in thickness (in a very large whale) is called junk, being formed of hard muscular fibres filled up with very fat oily matter. Beneath this is a cavity called the case, in which is contained a semi-liquid matter, which is spermaceti mixed with a little oil. This whale is not so timid as the bone whale, and has more means of offence. It can attack with its square head, its jaw, or its flukes, and either of them are usually fatal to its opponent. It is the monarch of the ocean, and probably the leviathan of Job. It is not usually dangerous or malicious, but when aroused and aware of its enemy, its ferocity is terrible; it is not satisfied with beating him off, but pursues him to his destruction. It pursues the boat of the whalemén until he has dashed it in pieces; but they who man it are too contemptible an enemy for this terror of the deep: when the apparent enemy is destroyed, the men are left to their fate, and are safely picked up by another boat.

The sperm, like the bone whale, breathes air, but is capable of remaining longer under the water. It is usually supposed that the sperm whale remains as long under the water as he does on the surface; and the largest have been known to be

one hour and a quarter on the surface, breathing, and the same time below. This whale has but one nostril or spout-hole, and in breathing blows the spray forward and low. He moves slowly through the water when not excited, but when attacked is capable of moving seven or eight miles an hour, and continuing at that rate for a great length of time. The male of the sperm whale is much larger than the female; the largest male whales having produced from one hundred and fifty to two hundred barrels of oil, while the largest female never yields more than forty barrels. Of the same genus as the sperm whale are the porpoise and black fish. Their habits are similar, and their oil of the same kind. All whales produce their young alive, one every year, and the young are suckled like the calf until they are capable of providing for their own sustenance.

Having given a short account of the habits of whales, and the character of the different species, I shall now describe the manner of taking them and saving the oil.

A whale-ship is usually fitted with three or four boats, according to her size. Each boat is manned with six people—one mate, one harpooner, or boat-steerer, and four sailors. Besides the boats' crews, she has six or eight men to keep the ship when the boats are in pursuit of whales; having in all from twenty-five to thirty-three men on board. Each boat is provided with a tub containing thirteen hundred and fifty feet of tow-line, which, when used, is made fast to two harpoons. She also has several lances, which are sharp weapons five feet in length and made fast to a pole, and used to despatch the whale after the boat is made fast to him by the barb-harpoon. There are also several minor articles attached to the boat, which conduce to the safety of the men in case of accident. The ship is also provided with two or three large iron pots, capable of containing from one hundred and sixty to two hundred and twenty gallons each, for the purpose of boiling out the oil. Thus provided, the ship takes her departure in search of the monsters of the deep. At this time commences the toil and excitement of the whalemén, which I shall now attempt to describe, using the lan-



Dangers of the Whale Fishery.

guage of the whalemén where it is intelligible to landsmén.

The ship goes on her course with an officer at her mainmast head, and a sailor at her fore. All is industry on deck. When the look-out aloft cries, "There she blows," instantly he is answered from the officer of the deck, with the shrill cry, "Where away?" He answers, giving the direction in which the fish is from the ship. Now all is bustle, but all is order. The captain with his telescope, ascends the mast, and observes the spout, and directs the ship to steer for the expected prey. The mates and boat-steerers prepare their weapons for the conflict. The men are all on the look-out to catch the first view of the whale from the deck. The old and seasoned whalémán looks forward to the strife with hope and excitement, and perhaps amuses himself by frightening the landsmén with the dangers they are about to encounter. At last comes the order, "Haul aback the main-yard, lower away the boats." In breathless haste the orders are obeyed, the boats are gone, the ship lies like a log on the waters, and all is silence and expectation. The boats speed toward their object, the old sailors recklessly indifferent to the danger, and highly excited with the hope of gain, and the pride of contest, the landsmén doubting but usually firm, and too proud to yield when others will lead.

Unaware of his danger, the leviathan of the deep lies idly on the water. His foe is upon him. All is silence and exertion; now comes the stern order to the harpooner, "Stand up—dart," and the barbed iron is buried deep in his vitals. Then is heard the shout, "Stern all" (to escape the danger of the agonized exertions of the wounded monster), and the reckless exultation of the daring whalémán; then writhing with pain he lashes the waters with his tail, and in the words of the Hebrew poet, "he maketh the sea to boil like a pot, one would think the deep to be hoary." But this, soon passes away, his strength is exhausted, and he lies trembling on the waters, or he seeks safety in flight. Now the boat by its tow-line is brought near to him, and the mate with his lance, strikes him to the heart; he throws blood from his nostrils; his breath-

ing is choked; in his agony he lashes the water; the ocean resounds with his bel-
lowing; his strength can endure no more. he rolls a lifeless mass on the waters, the prize and scorn of his puny enemy. Yet in all this there is but little danger to the bold and experienced whalémán. He watches the motions of his timid foe, he avoids the agonized blows of his tail, and suffers him to exhaust his great strength in futile exertions.

When the whale is dead commences the labor of saving the oil. The animal is brought along side of the ship, and secured by a chain around the small part of the body where it joins the flukes. Large tackles (or pulley-blocks with ropes rove through them) are made fast at the mainmast head, one end of the fall or rope is passed around the windlass forward; and to the lower block is attached a large hook. A hole is now cut in the blubber or outer coat of the whale, and the hook is placed in it; the men at the windlass then heave up the hook, a strip of about four feet in width of the blubber is cut by the officers of the ship, and the fat or blubber is peeled off as the bark is peeled from a tree. When a piece extending from the animal to the head of the mainmast is hove up, a new hole is cut and another tackle is made fast below, and the part above is cut off and lowered into the hold. The other tackle is hove up with another piece, rolling the whale over and over, until the whole of the blubber is taken into the ship. When everything valuable is secured, preparation is made to boil out the oil. Two men commence cutting the blubber into small oblong pieces. It is then passed to two others, who with large knives mince it thin, when it is placed in the large pots and heated until the oil flows from it, and all the water is expelled. The oil is then bailed into a large copper vessel from which it runs through a strainer into a large pot, and is thence put into casks and rolled away to cool. The scraps or solid matter of the blubber are used for fuel, so that every part is useful; and if it were not for the scraps, no ship could carry wood enough to boil out its oil. When the oil is cooled it is sent below into casks in the hold, by means of leather hose, and is there done

with until the ship arrives at home. The description of a whale-ship boiling at night, may amuse, and would convey no bad idea of the fancied infernal regions of former days. If the observer were placed near enough to see the general movements, and yet not so contiguous as to let dull reality dispel the illusion of appearance, and could fancy the heaving ocean glaring in the fitful light to be liquid sulphur, he would have the material hell of our precise ancestors before him. The men feeding their huge fires, and now stirring them into fierce action, the bright blaze flaring wide over the ocean and throwing in bold relief visages blackened by smoke, unshorn and shaggy, their bright steel forks and pikes now flashing in the light, and now indistinct as the flickering blaze fades away, and again seen as the master-demon throws boiling oil into the blaze (to give light to his operations), the hasty movements of the men passing suddenly before the fires and then lost in darkness, or their forms thrown at length before the blaze in the moments of relaxation—a morbid fancy might easily make it an image of terror, or a lighter mood might laugh at the ridiculous pageant as it passed before him.

few facts, which we have picked up either from personal observation, or from books.

Sometimes the reproduction of face and figure in the child seems almost perfect. Sometimes face is borrowed from one parent, and form of head, or of body, or of some of the limbs, from the other. Occasionally, there is a remarkable blending of the two throughout the whole or parts of the person. Even peculiarities in the carriage of the head or of the mode of walking are transmitted, and a family voice is nearly as common a marvel as a family face. A man, in a place distant from his home, and where he was totally unknown, has been distinguished as the brother of one known there by the sound of his voice heard in a neighboring apartment. But the almost perfect reproduction of the elder Kean's voice in the younger, is perhaps the most convincing illustration we could adduce upon this point. It will also be found that children resembling either parent externally, have a stronger affinity of mental character to that parent than to the other. A gentleman, very intimately known to us, is strikingly like his father, who has been deceased since his early youth: he also exhibits the same dispositions and intellectual tendencies in a remarkable degree, delights in the same studies, has the same turn for the perception of human character; nay, he often feels, in the simplest procedure of common life, so absolute an identity with what he remembers of his father in the same circumstances, and at the same period of life, as expressed by gesture and conversation, that it seems to him as if he were the same person. Nor can this, he says, be a result of imitation; it is something which takes place independently of all design, and which he only remarks, in general, after the act or feeling or movement, which recalls his father, has passed.

But it is not parents alone who are thus reproduced in new generations. In a large family familiarly known to us, as are all its relationships, we see, in the young persons, resemblances both to the father and mother and to one or other of the two grandfathers and grandmothers, notwithstanding that, in one or two instances, the intermediate generation did not bear those features of the first which are traced

PERSISTENCY OF FAMILY FEATURES.



T is well known that personal peculiarities of all kinds, defects as well as beauties, casts of features, and traits of expression, are transmitted from parents to their children. The fact stares us in the face

whenever we enter a family parlor, for there it is invariably seen that the young people bear a resemblance in one respect or another to their father or mother, or to both. This is a subject which has never, as far as we are aware, been honored with more than a transient notice at the hands of the learned; yet it might be worthy of philosophical investigation. We merely propose, in this place, to illustrate it by a

in the third. It thus appears that a peculiarity will sink in one generation, and reappear in the next. Perhaps even more generations than one are occasionally passed over. In this family, several of the children are totally different from the rest; complexion, form, gesticulations, voices, all peculiar. This seems to be owing to their "taking after" different parents, or the families to which the different parents belonged. What makes this the more remarkable, is, that one of these children, while in all respects unlike certain brothers and sisters, has one feature strikingly recalling the image of a distant cousin—a character of feature not seen in any other existing member of the family, and not remembered of any that are deceased. It would appear as if these minutæ of family characters fitted about fitfully and vaguely, and only settled now and then upon individuals in a clan, sometimes upon not more than two, or perhaps upon one only, in the same age. From all of these facts, it may be inferred that the strong resemblances sometimes remarked between cousins, are indications of their representing a common original, and of their being in reality more consanguineous than are many brothers and sisters. The unsuitableness of such relations for matrimonial alliances, must of course be affected by this consideration. Where resemblances exist, their union may be held as even more decisively condemned by nature, than is that between brothers and sisters who are not observably alike.

The limitation of portrait-painting as to time, is a bar to our knowledge with regard to instances of long transmission of family faces and features. Yet enough is ascertained to establish the law of the case. In the royal family of England, a certain fulness of the lower and lateral parts of the face is conspicuous in the portraits of the whole series of sovereigns, from George I. to Victoria. It has been equally seen in other members of the family. The Duke of Cumberland who figured at Culloden, presents generally the same visage as several of the sons of William IV. This physiognomy may be traced back to Sophia, the mother of George I.; how much further, we can

not tell. It is equally certain that a thickness of the under lip, peculiar to the imperial family of Austria (Maria Louisa is said to be characterized by it), has been hereditary in the race since a marriage some centuries ago with the Polish house of Jagellon, whence it came.

A remarkable anecdote illustrative of this subject was told us, some years ago, by a gentleman who has since distinguished himself in the walk of fictitious literature. Born in Nova Scotia, where his family, originally Scotch, had been settled for the greater part of a century, he had not an opportunity of visiting Scotland till past the middle of life. Here he endeavored to see as many as possible of the individuals bearing his rather uncommon name, and in this quest he often took journeys to considerable distances. Having heard of a family of the name residing at a lonely farm among the Lammermuir hills, he proceeded thither on foot from the nearest market town. As is not uncommon in such situations, the approach of a visitor could be observed from this house while he was yet fully a mile distant. Mr. H—— was observed at that distance by some of the children, who immediately cried out with one voice, "There is Uncle George!" When the stranger arrived at the house, the seniors of the family fully acknowledged the general resemblance of the figure and carriage to the person called uncle George; and it was ascertained, after a little conversation, that the Nova Scotian was in reality their cousin at two or three removes.

When Mr. William Howitt visited Stratford-on-Avon, in order to write respecting the places connected with Shakspeare, the schoolmaster informed him that a descendant of a near relation of the poet was one of his pupils. "He marshalled his laddish troop in a row," says Mr. Howitt, "and said to me, 'There, now, sir, can you tell which is a Shakspeare?' I glanced my eye along the line, and quickly fixing it on one boy, said, 'That is the Shakspeare.' 'You are right,' said the master, 'that is the Shakspeare—the Shakspeare cast of countenance is there. That is William Shakspeare Smith, a lineal descendant of the poet's sister.' The lad," continues Mr. Howitt, "was a fine lad of

perhaps ten years of age; and certainly the resemblance to the bust of Shakspeare, in the church at Stratford, is wonderful, considering he is not descended from Shakspeare himself, but from his sister, and that the seventh in descent. What is odd enough, whether it be mere accident or not, the color of the lad's eyes, a light hazel, is the same as that given to those of the Shakspeare bust, which it is well known was originally colored, and of which exact copies remain." These observations of Mr. Howitt are confirmed by a portrait of the youth, which he gives in his book. We are the less disposed to entertain doubts on the subject, in consequence of circumstances which have fallen under our own notice. Some years ago, a young man in humble life came forward to claim the restoration of the forfeited titles of the Seaton, earls of Wintoun, his grandfather having been assured that he was a legitimate though obscurely born son of the noble, who lost honors, and lands, by joining in the insurrection of 1715. From want of evidence, the claim was a hopeless one, and it was not prosecuted; but of one fact there could be no doubt that the young man so nearly resembled the sons of the fifth Lord Seaton, as represented in a family picture painted by Antony More, that he might have passed for their brother. These persons lived in the latter half of the sixteenth century.

The doubts which might rest on cases of particular resemblance in families, ought perhaps to be in a great measure dispelled, when we reflect on the evidence that exists with respect to the persistency of external characters in sets and races of people. Not only have we such facts as the prevalent tallness in the inhabitants of Potsdam, where Frederick I. assembled his regiment of longitudinal guards, and a strong infusion of Spanish features in the people of the county of Galway, in which some centuries ago several Spanish settlements were made; but we are assured by Major Bevan that he could distinguish the several castes in India by their peculiarities of countenance; and the Jews are the same people in Egyptian entablatures of three thousand years ago, as they are in some countries at the present day. Mr. Kohl, in his travels in Austria, speaks of

Prague as a very garden of beauty. "For the young ladies of 1841," says he, "I am ready to give my testimony most unreservedly, and many an enraptured traveler has left us his books as living witnesses to the loveliness of the grandmothers and great-grandmothers of the present generation. The old chronicler, Hammerschmidt, and his contemporaries, dwell with equal pleasure on the sweet faces that smiled upon them in their days, and the picture-gallery of many a Bohemian castle is there to testify to the truth of their statements. One witness there is to the fact, whose right few will question to decide on such a point. Titian, who studied the faces of lovely women for ninety-six years, and who, while at the court of Charles V., spent five years in Germany, tells us it was among the ladies of Prague that he found his *ideal* of a beautiful female head. If we go back beyond the times of Titian, we have the declaration of Charles IV., that Prague was a *hortus deliciarum*, and whoever has read the life of that emperor, will scarcely doubt that beautiful women must have been included in the delights of a capital so apostrophized. Nay, the time-honored nobility of the beauty of Prague may be said to go back even to the earliest tradition, where we find it celebrated in the legends of Libussa and Vlasta, and the countless songs composed in honor of the Devy Slavanske or Tshekhian damsels."

While there is a law of persistency, there seems also to be one modifying it, a law of variation. The continuance of national features depends much on adherence to the same region of the earth, and the same mode of living. When a people migrate to a remote and differently characterized clime, they are often seen to undergo, in the next generation, a change of features and of figure. Thus the unctuous Saxon of Kent and Suffolk, when transferred to Massachusetts, becomes metamorphosed into the lank and wiry New-Englander. Descendants of British settlers in the West Indies have been remarked, after several generations, to acquire some of the peculiar features of the aboriginal Americans, particularly high cheek-bones and eyes deeply set in the head. It has also been remarked in

New South Wales, that the generation of English born there are changed from their progenitors—taller, and less robust, besides having a share of that nasal tone which is found in the American English. These are curious facts, conveying the impression that national forms have been determined to some extent by peculiarities of climate and other external influences.

In the main, one generation is represented in another succeeding it. We die as individuals, but the character in mind and body, "with a difference," is revived and continued by those who come after us, and the tissue of human races is a kind of immortality.

POPE'S TREE.



THE village of Binfield, in Berkshire, situated about seven miles west of Windsor, and within the precinct of the forest, is remarkable from having been the residence of Alexander Pope, during his early years. The father of the poet, having accumulated a considerable fortune by business in London, retired to this place during the infancy of his son, and here purchased a house and estate.

Speaking of this house, which, although probably much altered from its original state, is still standing, Pope calls it—

— "my paternal cell.
A little house, with trees a-row,
And, like its master, very low."

About half a mile from the house, an interesting memorial of the poet still remains, or at least did so a few years since. There is here a fine grove of beeches, pleasantly situated on the gentle slope of a hill, which commands an agreeable though not extensive view of the surrounding country. This grove was a favorite resort of Pope's, who is said to have composed many of his earlier pieces sitting under the shade of one of the trees, below which a seat was then placed. The recollection of this circumstance was pre-

served by Lady Gower, an admirer of the poet, who caused the words "HERE POPE SUNG," to be cut in large letters in the bark, at some height from the ground; and as this inscription, at the time we mention, was distinctly legible, it was no doubt, at one period, occasionally renewed.

RETROSPECTION.



WE know of no spectacle so well calculated to teach human humiliation, and convince us of the utter fragility of the proudest monuments of art, as the relics which remind us of vast populations that have passed from the earth, and the empires that have crumbled into ruins. We read upon the ruins of the *past* the fate of the *present*. We feel as if the cities of men were built on foundations beneath which the earthquake slept, and that we abide in the midst of the same doom which has already swallowed so much of the records of mortal magnificence. Under such emotions, we look on all human power as foundationless, and view the proudest nations of the present as covered only with the mass of their desolation.

The Assyrian empire was once alike the terror and wonder of the world, and Babylon was perhaps never surpassed in power and gorgeous magnificence. But where is there even a relic of Babylon now, save on the faithful pages of Holy Writ? The very place of its existence is a matter of uncertainty and dispute. Alas! that the measure of time should be doomed to oblivion; and that those who first divided the year into months, and invented the zodiac itself, should take so sparing of immortality as to be, in the lapse of a few centuries, confounded with natural phenomena of mountain and valley.

Who can certainly show us the site of the tower that was "reared against heaven"? Who were the builders of the pyra-



Pope's Tree, at Binfield, Berks.

mids that have excited so much the astonishment of modern nations ?

Where is Rome, the irresistible monarch of the east, the terror of the world ? Where are the proud edifices of her glory, the fame of which has reached even to our time in classic vividness ? Alas, she, too, has faded away in sins and vices. Time has swept his unsparing scythe over her glories, and shorn this prince of its towering diadems.

" Her lonely columns stand sublime,
Flinging their shadows from on high,
Like dials which the wizard Time
Hath raised, to count his ages by."

Throughout the range of our western wilds, down in Mexico, Yucatan, Bolivia, &c., travellers have been able to discover the most indisputable evidences of extinct races of men highly skilled in learning and the arts, of whom we have no earthly record, save the remains of their wonderful works which time has spared for our contemplation. On the very spot where forests rise in unbroken grandeur, and seem to have been explored only by their natural inhabitants, generation after generation has stood, has lived, has warred, grown old, and passed away ; and not only their names, but their nation, their language, has perished, and utter oblivion has closed over their once-populous abodes. Who shall unravel to us the magnificent ruins of Mexico, Yucatan, and Bolivia, over which hangs the sublimest mystery, and which seem to have been *antiquities in the day of Pharaoh* ? Who were the builders of those gorgeous temples, obelisks, and palaces, now the ruins of a powerful and highly-cultivated people, whose national existence was probably before that of Thebes or Rome, Carthage or Athens ? Alas ! there is none to tell the tale ; all is conjecture, and our best information concerning them is derived only from uncertain analogy.

How forcibly do these wonderful revolutions, which overturn the masterworks of man, and utterly dissolve his boasted knowledge, remind us that *God is in them all* ! Wherever the eye is turned, to whatever quarter of the world the attention is directed, there lie the remains of more powerful, more advanced, and more highly skilled nations than ourselves, the almost

obliterated records of the mighty past. How seemingly well-founded was the delusion, and indeed how current even now, that the discovery of Columbus first opened the way for a cultivated people in the "new world." And yet, how great reason is there for the conclusion, that while the country of Ferdinand and Isabella was yet a stranger to the cultivated arts, America teemed with power and grandeur—with cities and temples, pyramids and mounds, in comparison with which the buildings of Spain bear not the slightest resemblance, and before which the relics of the old world are shorn of their grandeur !

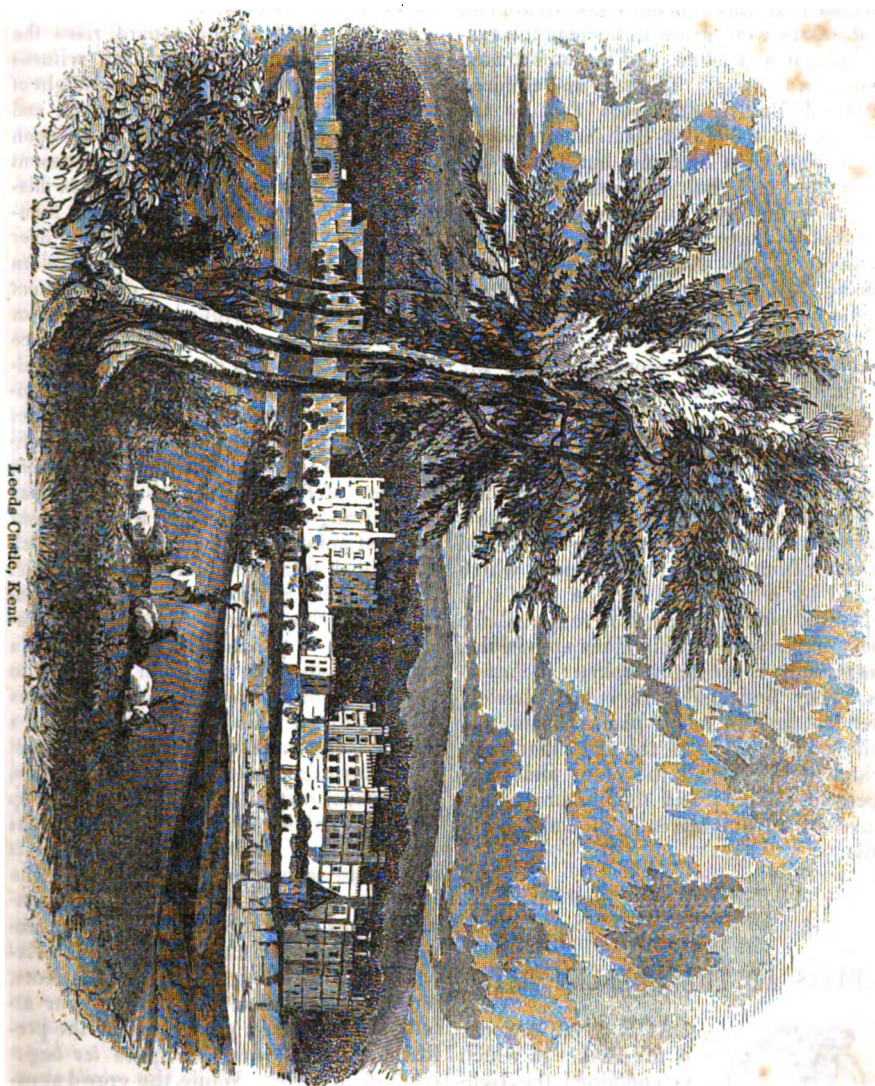
All these great relics of still greater nations, should they not teach us a lesson of humiliation, confirming, as they do, the truth that *God is in history* which man can not penetrate ? If the historian tells us truly that a hundred thousand men, relieved every three months, were thirty years in erecting a single Egyptian pyramid, what conclusion may we not reasonably form of the antiquities of our own continent, which is almost by way of derision, one would suppose, styled the "*new world* !"

LEEDS CASTLE, KENT.



IN a wild park south-east of Maidstone about five miles, stands Leeds Castle, an extensive pile of military architecture, principally of the thirteenth, fourteenth, and fifteenth centuries. In its history, there is little

beyond that attaching to every other similar building, which can "point a moral or adorn a tale." It passed several times from the crown to the favorites or faithful servants of the sovereign. Having by its strength and importance excited the jealousy of Edward I., the family which then held the fief resigned it to Edward II., who, about 1318, granted it in exchange to the "rich Lord Badlesmere of Leeds." This nobleman is said by Philipot, in his "*Villare Cantianum*," to have lost it by his



Leeds Castle, Kent.

castellain refusing to receive Isabel, queen of Edward II., and her train, on a progress to Canterbury, because the messengers brought the castellain no authority from his lord. The king was so much incensed at this uncourteous treatment, that orders were given to besiege the castle, which was taken, and the unfortunate keeper was hung. The lady and children of Lord Badlesmere were sent to the Tower, and the Lord Badlesmere joined the barons then in arms, but he and his associates and their followers being defeated by the royal forces, he was put to death at Canterbury. Richard II. resided at Leeds Castle at several periods; and during an alarming visitation of the plague, in the second year of the reign of Henry IV., that king also made it his residence. George III. and his consort visited the castle in 1779, and remained there two days.

The first stack of buildings on approaching the castle from the east, consists of the remains of towers, once of almost impregnable strength; but they are now sapped to their foundations by a stream of water from the surrounding moat, which is fed by a rivulet called the Len. In whatever point of view it is regarded, the most picturesque combinations are visible; the great lines are finely broken; the masses boldly projected; the colors chastely blended, and in many places beautifully relieved by groups of ash and other trees, which cluster round the older and more decayed towers; and the picture is finished by an amphitheatre of umbrageous hills.

PARIS AT THE PRESENT DAY.



LACE de la Concorde is the casket in which is contained the richest jewels in the crown of Paris, I might say of all the capitals in the world. There are, in many cities, monuments, which, when taken separately, are as beautiful as those

which form the frame of this magnificent picture, but nowhere are they brought together as in this place. Let us endeavor to station ourselves in the middle of this panorama, that we may understand it as a whole and in its details.

In the middle of the square, rises the obelisk of Luxor, that speaking witness of Egyptian grandeur, from the height of which the empire of the Sesostris, and the genius of past ages, looks down upon the grandeur and genius of the present time. On each side of this page of history, cut in granite, two magnificent fountains throw their sheets of water over groups of bronze, the wonders of modern art. Each basin, set in an embankment of asphaltum, is surrounded by fifteen or twenty candelabras. The whole surface of the Place is also covered with asphaltum, and surrounded with monumental candelabras, the stands and gilded branches of which give to the whole place a delicate yellow tint, which is in harmony with the tone of the obelisk. A passage has been arranged for carriages from the four cardinal points of this compass, of which the obelisk forms the hieroglyphic needle. A more noble portico could not have been formed for the *Champs-Elysees*, the fabulous name of which, has now become a truth. Lighted by gas from one end to the other, and in every direction, the sides of the paths of this drive have become a bed of lava which tempts the delicate feet of pedestrian ladies. Basins, statues, sumptuous restorateurs, have sprung up on every side. The Olympian circus carries there, during the summer, its equestrian spectacles, for which a scene has been prepared worthy the Roman amphitheatres. On the other side the panorama displays its magical canvass. Everywhere, travelling artists, ropedancers, musicians, punches, dispute for your attention, and attract your eyes, by the preliminary games which compose *les bagatelles de la porte*. While the crowd separates into different groups, walking, seated, grouped together before the mountebanks, the cocoa merchant glides from one to the other, and his silver bell appeals to thirsty throats; the dealer in sweetmeats and barley sugar drives a rival trade, and while boys are led away by these tempt-

ers, the little babies who have not yet the use of their legs are drawn about in small carriages, to each of which four little goats are harnessed. On the course, brilliant equipages, on their way to the Bois de Boulogne, meet omnibuses and coucoos, returning from Chailly and Neuilly. As the crown to this moving scene, this Parisian fair, the triumphal arch of the star, lifts in the distance its gigantic form, which is not equalled in proportion or richness, by any of the monuments of the kind which have remained from Grecian and Roman antiquity. This triumphal arch was finished before 1837; the Hippodrome has recently been built beside it. The Champs-Elysees has become the favorite rendezvous of Parisians, of both sexes, the famous alleys of the Tuilleries itself, are almost abandoned for this unrivalled promenade. Now that you have a feeble idea of the moving picture which is offered by the Champs-Elysees, look into this kaleidoscope from the middle of the Place de la Concorde—seize upon these thousand details, and then turn to contemplate the shady alleys of the garden of the Tuilleries, the beautiful marble groups with which it is decorated, and the imperial and royal palace to which are affixed so many recollections of grandeur, of terror, and of glory—on the right, salute the Magdalene and her Grecian portal, the Garde-Meuble, and the Hotel de la Marine, with their terraces and uniform colonnades; on the left, turn your eyes to the bridge, Louis XV., which has been judiciously relieved from the colossal statues which crushed it—to the severe front of the Chamber of Deputies—to the Dome des Invalides, which to meet your eye lifts its head of gold and bronze above the roofs—follow the Seine, which, changing its color in accordance with the objects reflected from its sides, goes off toward Passy, looking back with regret—and you will say it is a sight, unique in the world. But it is not by daylight that is to be looked at; it is in the evening, at night, when two or three hundred gas-burners, from the Place de la Concorde, and five or six hundred from the Champs-Elysees, are lighted up at once. Then the picture is fairy-like, the eyes are dazzled by these legions of sparkling lights, by these sheaves of water,

which murmur and shine, by this moving crowd, these rolling carriages, these children singing, women laughing, coachmen shouting, the whole city in motion, and finally by their thousand gigantic and phantasmagoric shadows. It is Nineveh, Babylon, Thebes, Rome; it is all these, and more than all these—it is Paris!

Paris covers at the present day a surface of more than 6,900 French acres, is peopled by a million of inhabitants, and contains 32,000 houses. This last item does not seem at first as high as might have been supposed. But it will be perceived to be immense, when it is borne in mind, that these are not houses, separated as in London by frequent squares, and that they all have from five to eight stories.

The total length of all the public ways, is about 500,000 metres or 125 leagues; that is the distance from Paris to Lyons.

The public streets count at the present time 3,210,000, square metres of pavement, and 800,000 of streets not paved, not including the Champs-Elysees and the Champ de Mars.

The subterranean aqueducts under Paris make a length of 110,000 metres, or 27½ leagues.

150,000 metres of pipe carry the water into every quarter. They supply 126 public fountains, 15 fountains for merchandise, and 1,600 private fountains.

150 leagues of pipe distribute the gas which lights the city, into all its quarters.

Add to all this a continuous wall, surrounded by ditches and bastions, covering a circumference of 14 leagues, and protected by sixteen Titans of stone and bronze, sixteen fortresses—a work of national defence which has no equal in the records of any nation, and which is the most grand of all the enterprises conceived and executed by Louis Philippe—that in which he has most largely wrought into masonry and melted into bronze, his immortality—that which would redeem, if necessary, in the eyes of intelligent patriots, all his errors or his faults, because it secures for the future the national independence, by rendering invulnerable the heart and the head of France, and meets the invaders of the country with the tactics of a strategy different from that which made the success and caused the reverses

of Napoleon. Place before your eyes all these wonders, all these great works, and the ant-heap moving within this triple enclosure of granite and of brass. Such is Paris.

THE SPRINGER ANTELOPE.



HE antelope represented in the engraving, is one of the most beautiful of the various species of antelopes which inhabit southern Africa.— It has received from the Dutch colonists the name of springbok, from the bounding leaps which it takes, and also pronkbok, showy or beautiful buck, from the colors which it discloses in leaping. This latter effect is caused by two folds of the skin, which, ascending from the root of the tail, and terminating upon the croup, dilate when the animal is bounding, and expose a large triangular space, otherwise concealed, of pure white-colored hair, edged by two dark streaks. The head of the animal is rather short, with somewhat of the expression of a lamb: the neck is slender, the body comparatively bulky, and the legs slender and elegantly turned. It is larger than the gazelle, but of the same make and color.

It resides on the plains of south Africa, to an unknown distance in the interior, in flocks, assembling in vast herds, and migrating from north to south, and back with the monsoons. These migrations, which are said to take place in their most numerous form only at the intervals of several years, appear to come from the northeast, and in masses of many thousands, devouring, like locusts, every green herb. The lion has been seen to migrate, and walk in the midst of the compressed phalanx, with only as much room between him and his victims as the fears of those immediately around could procure space by pressing outward.

The migrations of innumerable companies of springboks from unknown regions

in the interior of Africa to the abodes of civilization, are among the most extraordinary examples of the fecundity of animal life. The vast quantity of a species of birds of South America, which produce the guano (a manure) in sufficient abundance to be a great article of commerce—the flocks of pigeons of North America—the locusts of Africa—are not more striking than the herds of springboks.

It is scarcely possible for a person passing over some of the extensive tracts of the interior and admiring that elegant antelope, the springbok, thinly scattered over the plains, and bounding in playful innocence, to figure to himself that these ornaments of the desert can often become as destructive as the locusts themselves. The incredible numbers which sometimes pour in from the north during protracted droughts, distress the farmer inconceivably.

The springbok, like the hare, conceals itself in cover during the day, and resorts to the open plain in the evening and at night, for the purpose of feeding only. The Cape antelope, in fact, perfectly resembles the hare in all its characteristics. It lies continually in its form, leaving it only to procure food, or to escape from its enemies.

The bok is shot in great numbers by the Dutch boors. This sport is usually pursued on horseback, and in the heat of the day. The animal is then lying in its habitual lair, and on being disturbed by the sportsman, springs from it with a succession of bounds, than which nothing can be more beautiful or graceful.

The Dutch boor is generally an unerring shot; but in case the antelope should be only wounded, the buck-dog (a species of large mongrel) is always at the heels of his master's horse, and, at the report of his gun, darts forward and secures the animal. It is then placed behind the saddle, in the way shown in the engraving.

The horse used in buck-shooting is the hardy serviceable animal common to the country. Many of them are so well trained, that they stop the instant the bok gets up, but in most cases a slight check is necessary; the rein is then dropped on the horse's neck, and he remains motionless.



Hunting the Springbok at the Cape of Good Hope.

PRESENCE OF MIND.



THE differences of the conduct of individuals in situations of danger and sudden emergency are very striking; nor do we always find the best conduct in such circumstances from those who act best in the ordinary affairs of life. Often has it happened that a clever shrewd man of the world, has lost all reflection and power to act when unexpectedly overtaken by danger; and not less frequently do we see prompt and vigorous conduct manifested, on like occasions, by women who have never before given token of their being in any respect endowed above their neighbors. Presence of mind thus appears as something not necessarily to be found in union with high intellect or skill. A cunning bravery of the timid, a cowardly, but laudably cowardly adroitness of the brave, it sometimes almost appears as an inspiration; and yet we know that it is but a natural endowment, capable, like all others, of being cultivated in everybody by the use of appropriate means. We have heard of a gentleman who took his son to bathe, and actually threw him into a situation of danger, in order to elicit and train his presence of mind: we also know that barbarous nations of warlike character use similar methods with their youth, by way of fitting them for every kind of peril and ambuscade. It is not, perhaps, desirable that any such plans should be resorted to in our present civilized circumstances; but certainly there is much need to prepare the minds of the young for difficulties and crises, by a full explanation of such as are still likely to occur in the course of life, and by accustoming them as far as possible to habits of prompt action and self-reliance. Much might be done in parlor existence, merely by establishing a certain cool manner for the treatment of all extraordinary matters; for we are so greatly creatures of habit, that, if we allow ourselves to be thrown into an excitement by all the little out-of-the-way occurrences of life, we are extremely likely to

be thrown into a paroxysm of the same feeling by events of greater moment; nor is it less true that a steady and sober way of viewing small matters will fit us for viewing great ones without the excitement which produces confusion of mind. We verily believe that the stupid habit of getting up a clamor about trifles, has led in many instances to that wildness of alarm in cases of danger which not only forbids escape to the unhappy being exhibiting it, but tends to paralyze and endanger others. The general safety often depends on an entire suppression of excitement and outcry, and it is therefore of the greatest consequence that every person should be trained to a *quiet*, not to speak of a firm manner of acting under trivial difficulties.

The value of such conduct on occasions of peril involving many lives, was never perhaps better exemplified than in the destruction of the Kent East Indiaman by fire, when not even from the women and children was one sound of alarm heard, the consequence of which was, that the officers and sailors were enabled to do all that was possible in the circumstances for the preservation of the people on board, and the whole of the procedure connected with their transference to the saving-vessel was conducted with as much regularity and almost as much safety, as if it had taken place on an ordinary occasion. In striking contrast was the scene on board the Halsewell, where the two daughters of the captain, losing all self-command, threw themselves upon their father with such frantic cries and lamentations, as overwhelmed his naturally intrepid mind, and thus extinguished the energies upon which at the moment so much depended.

We so continually, in the journals of the day, see evil consequences from want of presence of mind, in circumstances where the proper conduct has long been generally agreed upon, that we might be tempted to believe it a quality beyond mortal reach, if we were not aware how many things, which appear notorious to all, are in reality unknown to many. Hardly a week passes without telling us of a female having caught fire and lost her life in consequence of rushing out into the open air, instead of rolling herself in a carpet, or at least prostrating herself on the floor.

Panics occasionally take place in theatres and churches, and scores of lives are lost by a crowding to the door: not one instance do we remember of an alarm in such places of resort being attended by the proper conduct—*sitting still*. Individuals are also still much given to throwing themselves out of runaway carriages, an act which may be pronounced the very opposite of the proper conduct. But the fact is, that, while some of these errors are the consequence of mere confusion of mind, many are also the result of ignorance. The right conduct in situations of difficulty is far from being generally impressed, as it ought to be, on the minds of the young. Or, if it has been taught as a lesson, there has at least been no effort to train the mind to look to it as the only course of action in which there is the least safety; so that when the critical moment arrives, we are still too prone to act upon some mere instinct for self-preservation.

Presence of mind is exemplified in its simplest form, where all that is necessary is to take a deliberate view of the circumstances, and then do that which seems most advantageous. It may be shown, for example, in a choice between the door and window in a case of fire, or in the selection of something to be saved, as that which is most important. In the year 1716, when a captain came with his troop to execute the vengeance of the government upon the house of a Jacobite gentleman in Perthshire, he humanely gave the inmates a few minutes to remove whatever they deemed most valuable. A lady, the sister of the absent landlord, flew to the storeroom, thinking to save the plate; when she afterward inspected the contents of her apron on the lawn, she found, too late, that she had only rescued a quantity of old candlesticks, butter-boats, and similar trash. A gentleman just escaped from a fire in his house, joyfully told his congratulating friends that, in the midst of the confusion, he had been able to open a drawer and save his principal papers. He emptied his pockets, and found only scraps of no use, which had chanced to lie in the same place. We have also heard of a gentleman and his wife who escaped with great difficulty from their burning house, he bearing, as he thought,

their infant in his arms. It proved to be but a pillow which he had snatched up in his haste! A moment devoted to a steady, thoughtful consideration of the circumstances, might in all these cases have been attended with the opposite consequences.

Presence of mind is occasionally shown in quick conception of some device or expedient, such as we usually suppose to be an emanation of superior intellect. This has been repeatedly exemplified in rencontres with the insane. A lady was one evening sitting in her drawing-room alone, when the only other inmate of the house, a brother, who for a time had been betraying a tendency to unsoundness of mind, entered with a carving-knife in his hand, and shutting the door, came up to her and said, "Margaret, an odd idea has occurred to me. I wish to paint the head of John the Baptist, and I think yours might make an excellent study for it. So, if you please, I will cut off your head." The lady looked at her brother's eye, and seeing in it no token of a jest, concluded that he meant to do as he said. There was an open window and a balcony by her side, with a street in front; but a moment satisfied her that safety did not lie that way. So putting on a smiling countenance, she said, with the greatest apparent cordiality, "That is a strange idea, George; but wouldn't it be a pity to spoil this pretty new lace tippet I have got? I'll just step to my room to put it off, and be with you again in half a minute." Without waiting to give him time to consider, she stepped lightly across the floor, and passed out. In another moment she was safe in her own room, whence she easily gave an alarm, and the madman was secured.

Some anecdotes of escapes from assassins and robbers, by the prompt exercise of presence of mind, are much to the same purpose. A young man, travelling in one of the public coaches, was much interested by the accounts of robberies which his fellow-passengers were detailing. An old gentleman mentioned that he always took the precaution of secreting his money in his boot, merely keeping silver for his incidental expenses in his pocket. The old gentleman appeared to be captivated with the politeness and intelligence of the young man, to whom he addressed much of his

conversation, who on his part was equally pleased with the kindness and urbanity of his elder companion. Thus some hours had passed agreeably, when, just at night-fall, as they were passing a wild and lonely moor, the coach was stopped by robbers, who rifled the pockets of those nearest to them, giving the old gentleman a hearty execration for having his purse so badly furnished. They came last to the young man, who was seated in the far corner, and demanded his purse. "I never carry any money," said he. "We'll not take your word for that," said his assailants. "Indeed I don't," said the young man; "my uncle always pays for us both, and there he is," continued he, pointing to the old gentleman, "and he has got our money in his boot." The old gentleman was dragged from the coach, his boot pulled off, and three ten-pound notes were found. He was then suffered to resume his seat, and the coach drove on. Hot was his anger, and bitter were his upbraidings, against his betrayer, whom he did not hesitate to accuse both of treachery and pusillanimity. The young man listened in silence, as if ashamed and conscience-stricken. They passed over some miles, and at length reached an inn by the wayside. The travellers alighted, and on going in, the young man requested the old gentleman would allow him to say a few words in private. They retired into a room by themselves. "I have not only to ask your pardon, my dear sir," said the young man, "but to thank you for the fortunate expedient with which your confidence furnished me, and to hand to you the sum of thirty pounds, in lieu of that which I appeared so unceremoniously to point out to the robbers. I am sure you will forgive me, when I tell you that the note-case in my pocket contained notes for £500, the loss of which would have been utter ruin to me." It need scarcely be added, that the adopted uncle shook hands cordially with his young acquaintance, and took him into more marked favor than ever.

But there are more painful tests to which presence of mind may be put than even personal danger, however great. It is when, seeing a beloved object in imminent peril, one inadvertent word, one pas-

sionate exclamation, one burst of sensibility, might increase the risk tenfold. It were needless to insist on the urgent necessity of presence of mind, in the form of self-command, at such a time, and we will merely illustrate the subject by an example where the strongest sensibilities of our nature were suppressed, while some, without one particle more of affection, but many thousand degrees less of sense and self-control, would have screamed, or fainted, or acted so as to hurry on the catastrophe most dreaded. A lady one day returning from a drive, looked up and saw two of her children, one about five, and the other about four years old, outside the garret window, which they were busily employed in rubbing with their handkerchiefs, in imitation of a person whom they had seen a few days before cleaning the windows. They had clambered over the bars which had been intended to secure them from danger. The lady had sufficient command over herself not to appear to observe them; she did not utter one word, but hastened up to the nursery, and instead of rushing forward to snatch them in, which might have frightened them, and caused them to lose their balance, she stood a little apart, and called gently to them, and bade them come in. They saw no appearance of hurry or agitation in their mamma, so took their time, and deliberately climbed the bars, and landed safely in the room. One look of terror, one tone of impatience from her, and the little creatures might have become confused, and lost their footing, and been destroyed.

It has sometimes happened that, in hurry and confusion, a wrong medicine has been administered by the hand of one who would have sacrificed life to save a beloved object from the danger with which they were threatened by a sudden illness or accident, and who, had they preserved their presence of mind, might have been spared one of the bitterest misfortunes that can be conceived. To have self-possession in such a case, may be life and health to one who is everything to us. It may happen, too, that illness or accident may overtake us while away from medical aid, or distant from any friend.

Presence of mind may also be brought

to bear with good effect in many of the trivial conjunctures of life. It is often shown in a ready answer, turning anger into good humor, or overturning a false accusation, which otherwise might have proved troublesome. There can be no question that it may be improved for serious emergencies by being cultivated in these familiar and more simple cases. But there is one caution to be observed—let presence of mind be used only as a defence. When employed for purposes of deception, or to advance selfish objects, we may admire it as an intellectual feature, but regret must at the same time arise, that the direction given to it is one in which we can not sympathise.

MUSIC.

WHAT is that strange enchantment which results from harmonious sounds given forth by an instrument or the human voice? We call it music, but what is there in the harmony of sounds or the melody of voices, that should so strangely affect the human mind? The infant falls into a gentle slumber while listening to the cradle-song of a watchful mother or nurse. The proud and haughty spirit of the boy is subdued by the charms of song. The wayward youth is roused from his profligacy and melted to tears and penitence, by the recurrence of some simple melody heard often in childhood. The heart of manhood is chastened and mellowed, and the soul lifted from earth as it listens to or joins in the swelling anthems of the sanctuaries of God. Under the influence of martial music, the soldier rushes heedless to slaughter and death. The spirit-stirring drum must be beaten and heard above the discharge of musketry and roar of cannon, to nerve him to conflict. The Marseilles hymn will rouse the populace of France to madness, and the British soldier dies upon the field of battle in triumph, if he can but listen to his national anthem. And why is this, if the soul of man be not itself an exquisite instrument, attuned to the harmonies of the universe—an immortal harp, whose strings catch the breath of every melody?

NEAPOLITAN MACCARONI-EATERS.



MACCARONI or maccheroni (the learned are divided as to the orthography and etymology of the word) is the principal food of the poorer, and the favorite dish of all classes of Neapolitans. So much is this the case, that the people of Naples have had for many ages the nickname of "Mangia-maccaroni," or maccaroni-eaters.

The best maccaroni is made entirely of the grano duro; but, in the inferior qualities, this is sometimes mixed with soft wheat. The conversion of the flour—which is somewhat more coarsely ground than that intended for bread—into the long, round strings called maccaroni, is effected by a very simple process. With the addition of water alone, the flour is worked up into paste, and this paste is kneaded for a length of time, by a heavy, loaded block of wood, which beats into the trough where the paste is deposited; this block or piston is attached to a beam, acting as a lever, whose fulcrum is near to the block, while the other extremity of the beam is some eight or ten feet from the fulcrum. One or more men or boys seat themselves astride at the further end of this beam, and descending with their own weight, and springing up by putting their feet to the ground, give the requisite reciprocating motion to the lever. They, in fact, play at see-saw with the block at the shorter end of the lever; and the effect produced on the eye of a stranger by a large manufactory where several of these machines and a number of sturdy fellows, nearly naked, and all bobbing up and down, are at work, has something exceedingly ludicrous in it. When the paste has been sufficiently kneaded, it is forced, by simple pressure, through a number of circular holes, the sizes of which determine the name to be given to the substance. That of superior diameter is maccaroni, that smaller is vermicelli, and that smaller still is called fedelini. The maccaroni is hollow throughout, and many persons have



The Maccaroni Sellers of Naples.

been puzzled to know how it is formed into these long tubes. Nothing is more simple. Over each of the larger holes meant for macaroni, a small copper bridge is erected, which is sufficiently elevated to permit the paste to pass under it into the hole: from this bridge depends a copper wire, which goes right through the hole, and of course leaves hollow the paste that descends through the hole. Such of our readers as have seen our common clay pipes for smoking manufactured, will readily understand this, for this part of the process is the same for macaroni as for pipes. There are some minor distinctions in the preparation of these respective articles, which it would be tedious to explain, but the material and main process are the same in all. When the paste has been forced through the holes, like wire through a wire-drawer's plate, a workman takes up the macaroni or vermicelli, and hangs it across a line to dry. From the long kneading it has received, the substance is very consistent, and dries in unbroken strings that are two or three yards in length.

This paste forms the principal food of the poorer classes of Neapolitans, many of whom do not eat meat for weeks, nay months together, but they care not for this if they can have their macaroni, which is to them a substitute for every eatable.

THE FLIGHT OF TIME.



IN every age of the world the rapid flight of time has been a subject of deep and solemn consideration. When the patriarch of Israel stood before the monarch of Egypt and listened to his question—"How old art thou?" it seemed to throw a melancholy interest over the past. Long as this aged man had lived, the time appeared to him but as a dream, and as he looked upon the numbered years which had laid his fathers in their sepulchres, and brought

himself near to their resting-place, a spirit of sadness came over him.

No orator has been more eloquent upon the flight of time than the man of Uz—"Man that is born of a woman is of few days and full of trouble. He cometh forth like a flower, and is cut down. He fleeth also as a shadow and continueth not. His days are swifter than a weaver's shuttle; they are passed away as the swift ships, and as the eagle that hasteth to his prey."

Coming down the tide of time still further, we find the noble monarch of Israel and the sublime Isaiah, sending forth their sad numbers. "The days of man are as grass. As a flower of the field, so he flourisheth. For the wind passeth over it, and it is gone, and the place thereof shall know it no more."—"All flesh is grass, and the goodliness thereof as the flower of the field."

The great apostle to the Gentiles writes to the Corinthians to be careful of their earthly relations, for the "time is short," and another apostle assures us that "life is but a vapor that appeareth for a little time and then vanisheth away." Whatever may be the true cause, in an apostate world, the flight of years casts a shadow over its generations. If sin had never entered the world, probably the tide of time would produce no such feelings as we now experience in its rapid passage. Death and decay would be unknown. Age succeeding age would bring no sad reverse, no melancholy change. If time departed, it would only add wisdom, loyalty, and love, to sinless hearts. But this is not the case. We are in a world where sin has entered, where the process of decay is constantly going on, and where death is busily and always at work. We see monuments of arts and genius arise under the hand of man. The finger of time touches them and they turn to ashes. The proudest productions of human power, the magnificent structures which the skill or pride of man can rear, are destined to fall before the devouring ravages of time.

Surrounded thus with the evidences of frailty and decay, warned at every step of the certainty of our dissolution, as well as that grand catastrophe when the world shall burn and the elements melt with fer-

vent heat, wise will it be for us so to number our fleeting days as to apply our hearts unto wisdom, and cause the fugitive hour to bear record of good to Him in whose hands are all our times, and who commands our breath.

APRIL.



PRIL is usually supposed to be derived from the Latin word *aperio*, to open: our Anglo-Saxon ancestors called it *Oster Monat*, and *Easter Moneth*, and are said to

have held a feast in celebration of the goddess *Eastre*.

April weather is become a proverbial expression for a mixture of the bright and gloomy. The pleasantness of the sunshiny days, with the delightful view of fresh greens and newly-opened flowers, is unequalled; but they are frequently overcast with clouds, and chilled by rough wintry blasts.

This month gives the most perfect image of spring; for its vicissitudes, of warm gleams of sunshine and gentle showers, have the most powerful effects in hastening the universal *springing* of the vegetable tribes; whence the season derives its appellation. April generally begins with raw, unpleasant weather, the influence of the equinoctial storms still in some degree prevailing.

Early in the month, that welcome guest and harbinger of summer, the swallow, returns. The kind first seen is the chimney or house-swallow, known by its long forked tail and red breast. At first, here and there only one appears, glancing quick by us, as if scarce able to endure the cold. But in a few days, their number is much increased, and they sport with seeming pleasure in the warm sunshine.

As these birds live on insects, their appearance is a certain proof that some of this minute tribe of animals are now got

abroad from their winter retreats. "The migration of birds," says the excellent Mr. Ray, "from a hotter to a colder country, or a colder to a hotter, according to the season of the year, as their nature is, I know not how to give an account of, it is so strange and admirable. What moves them to shift their quarters? you will say, the disagreeableness of the temper of the air to the constitution of their bodies, or want of food. But how come they to be directed to the same place yearly, though sometimes but a little island, as the Solan geese to the Bass of Edinburgh frith which they could not possibly see, and so it could have no influence upon them that way. The cold or the heat might possibly drive them in a direct line from either, but that they should impel land birds to venture over a wide ocean, of which they can see no end, is strange and unaccountable! one would think that the sight of so much water, and present fear of drowning, should overcome the sense of hunger, or disagreeableness of the temper of the air. Besides, how come they to steer their course aright to their several quarters, which, before the compass was invented, was hard for a man himself to do, they being not able, as I noted before, to see them at that distance? Think we that the quails, for instance, could see quite across the Mediterranean sea? and yet it is clear they fly out of Italy into Africa, lighting many times on ships in the midst of the sea, to rest themselves when tired and spent with flying. That they should thus shift places is very convenient for them, and accordingly we see they do it; which seems to be impossible they should, unless themselves were endued with reason, or directed and acted upon by a superior intelligent Cause."

MUSCULAR STRENGTH.

THE power exerted by the action of the muscles in the human body is immense. Borellus first demonstrated that the force exerted within the body greatly exceeds the weight to be moved, and that nature, in fact, employs an astonishing, we might

almost say superfluous power, to move a small weight. It has been calculated that the deltoid muscle, alone, which is situated near the top of the shoulder, when employed in supporting a weight of fifty pounds, exerts a force equal to two thousand four hundred and sixty-eight pounds. An idea of the force exerted by the human body when in progressive motion, may be formed from the violence of the shock received when the foot unexpectedly strikes against an object in running. The strongest bones are sometimes fractured by the action of the muscles.

The muscular power of the human body is indeed wonderful. A Turkish porter will trot at a rapid pace, carrying a weight of six hundred pounds. Milo, a celebrated athlete of Croona, in Italy, early accustomed himself to carry the greatest burdens, and by degrees became a monster in strength. It is said that he carried on his shoulder an ox four years old, weighing upward of one thousand pounds, for above forty yards, and afterward killed it with one blow of his fist. He was seven times crowned at the Pythian games, and six at the Olympian. He presented himself the seventh time, but no one had the courage to enter the list against him. He was one of the disciples of Pythagoras, and to his uncommon strength the learned preceptor and his pupils owed their lives. The pillar which supported the roof of the school suddenly gave way, but Milo supported the whole weight of the building, and gave the philosopher time to escape. In his old age, Milo attempted to pull up a tree by its roots and break it. He partly effected it, but his strength being gradually exhausted, the tree, when half cleft, reunited, and his hands remained pinched in the body of it. He was then alone, and being unable to disengage himself, died in that position.

Haller mentions that he saw a man, whose finger being caught in a chain at the bottom of a mine, by keeping it forcibly bent, supported by that means the weight of his whole body, one hundred and fifty pounds, until he was drawn up to the surface, a height of six hundred feet.

Augustus II., king of Poland, could roll up a silver plate like a sheet of paper, and twist the strongest horseshoe asunder.

A Frenchman, who was attached to Rockwell & Stone's circus, last spring, was able to resist the united strength of four horses, as was witnessed by hundreds in New York and other places. A lion is said to have left the impression of his teeth upon a piece of solid iron.

The most prodigious power of muscle is exhibited by fish. The whale moves with a velocity through the dense medium of water, that would carry him, continued at the same rate, round the world in little less than a fortnight; and a sword-fish has been known to strike his weapon quite through the oak plank of a ship.

THE SALT-MINES OF CARDONA.



CARDONA is a small but interesting town, scarcely known to geographers or even to the Spanish government, but it will repay the visit of the traveller who, in proceeding from France to Barcelona, takes the way of Seu Urgel instead of the one by Perpignan, and after passing a fine forest of oak and hazel-nut will find this picturesque mountain-town lying between Solsona and Manresa. The mines are situated about three miles to the east of the town, and resemble a huge stone-quarry, about twelve miles in circumference. You descend by a flight of five or six broad steps cut in the rock on the north side. It is most truly an ocean of salt, for there is not the smallest particle either of mould or gravel. The Cardonera, a mountain stream not more than twenty feet wide, flows through the midst of the mine in a bed of salt, which looks almost like the work of human hands. For many miles of its course it deposits salt upon its banks, and the country people along its whole extent till its junction with the Llobregat, where it loses its saline qualities, use the water for culinary purposes in lieu of salt. Fine flocks of sheep feed on its banks.

On the left hand of the entrance into



Salt Hills at Cardona, in Catalonia

the mine is a wooden building used as a residence for the inspector. A sort of large cistern, excavated as far back as the reign of Charles III., for the purpose of ascertaining the depth of the mine, had been dug to the depth of above 150 feet, when a stop was put to the work. The salt, which lies exposed, consists of an enormous mass of rock of dazzling whiteness, and the blocks blasted in the mine are about the size of large building stones. When the sun throws its rays upon this mine, which is enclosed on three sides by mountains, the reflected light is as strong as that of the sun itself.

Numerous other beds of salt are found in these lofty mountains, but as they are overgrown with forests of pine, cork, and carob-trees, the salt does not lie so near the surface; no attempt, however, has ever been made to work them, nor indeed would it be required, as the mine of Cardona alone could supply for centuries the wants of the whole of Europe, without any apparent diminution of its resources. The salt contained in the mountains is not, however, white, being found of all colors, rose, scarlet, blue, green, violet, yellow, and brown of various shades, some veined like marble, and others again shining with a silvery lustre. On being pounded, every vestige of color disappears, and it becomes as white as that found in the mine. Attempts have been made to preserve specimens, but in a few years they fade and crumble to pieces. Those which have been constantly exposed to the weather possess greater permanence.

About two hundred men are employed in the mine. Their labor consists in blasting the enormous masses of rock salt, piling them up in exposed pyramidal magazines in the mine, rehousing those which have stuck from the action of rain-water, and loading the mules which are to convey the salt to the neighboring towns and the ports of Barcelona and Tarragona, whence it is exported to England and the northern states of Europe. A single handful of Cardona salt has twice the virtue of that obtained from the sea at Iviza and Cadiz, and yet, strange to say, the natives of Estremadura, Leon, Galicia, Asturias, Biscay, Navarre, and Old

Castile get their supply of salt from Portugal, nay, even from the English vessels, which bring it from the northern counties. If it be asked why half Spain does not avail itself of its own exhaustless treasures, the answer given is, that the Cardona salt, though of superior quality, comes dearer on the whole. Whence does this arise, seeing that the supply is so abundant? From no other cause but that there is no road to Cardona; and yet this pretty little town is but twenty leagues from the much-frequented harbor of Barcelona. The only access to Cardona is by a footway across the mountains, so narrow as scarcely to admit of two laden mules passing each other, and in fact, attended with so many delays and difficulties, that the journey takes six days, at the end of which the mules are so exhausted as to require several days' rest.

THE PULSE.



VERY one knows that among the numerous inquiries and examinations which precede the prescription of a careful physician, the state of the pulse is never omitted; yet as it is

probable that few of our readers are acquainted with the reasons for this inquiry, or, what is the same thing, with the facts to be learned from it, we think it may not be uninteresting if we enumerate some of the more prominent ones.

It is almost unnecessary to premise that by the pulse is meant the beat of an artery, and that the one commonly chosen for examination is the radial artery, which beats at the wrist. The first point generally attended to is the number of the beats; and since in this, as in all other medical questions, it is necessary to be acquainted with the state of health in order to recognise any deviation from it, we must mention the ordinary frequency of the pulse at different ages. In the newborn infant, it is from 130 to 140 in a

minute, but decreases in frequency as life advances; so that, in a middle-aged adult in perfect health, it is from 72 to 75. In the decline of life it is slower than this, and falls to about 60. It is obvious that if we could suppose a practitioner ignorant of these plain facts, he would be liable to make the most absurd blunders, and might imagine a boy of ten to be laboring under some grievous disease, because his pulse had not the slow sobriety of his grandfather's. A more likely error is, to mistake the influence of some temporary cause for the effect of a more permanent disease: thus, in a nervous patient, the doctor's knock at the door will quicken the pulse some 15 or 20 beats in a minute. This fact did not escape the notice of the sagacious Celsus, who says: "The pulse will be altered by the approach of the physician, and the anxiety of the patient doubting what his opinion of the case may be. For this reason, a skilful physician will not feel the pulse as soon as he comes; but he will first sit down with a cheerful countenance, and ask how the patient is, soothing him, if he be timorous, by the kindness of his conversation, and afterward applying his hand to the patient's arm.—(De Medica, lib. iii., cap. 7.*)"

Granting, however, that these sources of error are avoided, the quickness of the pulse will afford most important information. If in a person, for example, whose pulse is usually 72, the beats rise in number to 98, some alarming disease is certainly present; or, on the other hand, should it have permanently sunk to 50, it is but too probable that the source of the circulation, the heart itself, is laboring under incurable disease, or that some other of the great springs of life is irremediably injured.

Supposing, again, the pulse to be at 72, each beat ought to occur at an interval of five sixths of a second; but should any deviation from this rhythm be perceived, the pulse is then said to be irregular. The varieties of irregularity are infinite;

* The lapse of eighteen centuries has not destroyed the utility, much less the beauty, of the eight books on medicine bequeathed by Celsus to posterity; they are unrivalled for perspicuous elegance and laconic good sense. Celsus is one of the writers of the Augustan age, and is worthy of the times in which he flourished.

but there is one so remarkable as to deserve particular mention. It will happen sometimes that the interval between two beats is so much longer than was expected, that it would seem that one beat had been omitted; in this case the pulse is said to be an intermittent one. When the action of the heart is irregular, the beat of the pulse is so likewise; but it will occasionally happen that the latter irregularity takes place without the former one, from some morbid cause existing between the heart and the wrist. It is hardly necessary to observe, that in all doubtful cases, the physician examines the pulsation of the heart as well as that at the wrist—just as the diligent student, discontented with the narrow limits of provincial information, repairs to the metropolis to pursue his scientific inquiries.

The strength or feebleness of the pulse, its hardness or softness, and innumerable other qualities, might be discussed here; but from the great difficulty attending any examination of these points, and the technical niceties involved in anything more than a bare mention of them, we omit them. There is one point, however, which it would be unpardonable to pass over in silence: sometimes no pulsation can be felt at the usual part of the wrist. This may proceed from so great a languor of the circulation that it is imperceptible at the extremities; or from the radial artery (the one usually felt) being ossified; or from an irregular distribution of the arteries of the fore-arm.

ARTICLES OF DRESS.



ATS are not a modern invention as they were used by some of the ancient Greeks. In the time of Edward III. and of Richard II., white hats were

worn at Ghent as the badge of a political party. Hats were confined to the wealthy

until the reign of Henry VIII. In the reign of Elizabeth, high crowns came in fashion, and were often pointed and conical. At that time hats were restricted by act of Parliament to the upper classes of society; the middle and lower class being confined to the use of knit caps. This act being repealed, felt hats came into common use. During the commonwealth, broad-brims were generally used. These being often inconvenient, it became the custom to turn up one or two sides, which led to the three-cocked hat, in the time of Queen Anne. About 1750, round hats being prevalent among the lower orders, the cocked hat was the distinction of a gentleman. About 1790, cocked hats were laid aside, and ever since round hats have been the universal wear.

SHOES were worn by the ancient Egyptians. Several Egyptian shoes are preserved in the British museum, made of matting, the bark of papyrus, leather, and other materials. Shoes were worn by the Greeks and Romans, although they generally wore sandals, which were merely soles tied on the feet with thongs. The most simple kind of shoes appear to have been a piece of leather bound round the foot; shoes of this kind are still used in the remote parts of the Highlands of Scotland. In the reign of Edward IV., shoes were pointed at the toes, and had long beaks of four or five inches, turned up and fastened at the knees by a chain. Afterward they were quite round at the toes, and in the reign of Charles I., the toes were square, and boots came only half up to the knee, with wide tops turned down. The leather of which shoes were made was of different colors. Blacking is a very late fashion.

GLOVES are not a modern invention. They were worn, as we are informed by Herodotus, by the ancient Persians; they were also in use among the ancient Romans. In the early ages of Christianity, gloves were a part of monastic costume, and in later periods formed a part of the episcopal habit. The glove was employed by princes as a token of investiture; and to deprive a person of his gloves was a mark of divesting him of his office. Throwing down a glove constituted a challenge, and the taking it up an accept-

ance; this custom continued until the reign of Queen Elizabeth.

STOCKINGS, as now made, are comparatively a modern invention. Previously to the time of Henry VII., knitted stockings of silk were unknown. "King Henry VIII. did wear only cloth hose," says Stowe in his Chronicle, "or hose cut out of ell broad taffata; or that by great chance there came a pair of Spanish silk stockings from Spain." Silk stockings were articles of great rarity in the time of Elizabeth. Stockings continued to be knit by hand until 1589, when a stocking-loom was invented by William Lee, near Nottingham. Lee, not being sufficiently patronized in England, removed to Rouen, in France, where he established his manufactory.

GATHERING OLIVES.



HE method of gathering the olive varies in different parts of the peninsula. The most general way in Portugal, however, is to beat them down with long poles, and afterward collect them in sacks, or baskets. Both the oil and the fruit are inferior by this method, as the fall bruises the produce too much. The Spaniards gather them all by hand, and though the process is more laborious and expensive, ample compensation is made in the superiority of these olives over those beaten down by poles. When intended for food they are prepared in two ways: one is simply to cut them and soak them in salt and water, adding a few herbs to give a flavor; the other is, first to dry them in the sun, whereby they become black, and afterward to put them in jars, with oil, salt, pepper, or other spices, adding also a few herbs. When eaten by the natives, they are invariably flavored with oil and a little vinegar. With us, olives are used only at the tables of the wealthy as a luxury—disagreeable enough to those who are unaccustomed to their flavor; but in the coun-



Gathering Olives.

tries of their growth they are essential articles of food. The shepherd takes nothing with him to the field but a little bread, a flask of wine, and a horn of olives; the carretiero, or carman, carries with him only his wineskin, his loaf, and olives; and the laborer in the field, and the peasant in his cottage, often have nothing more till nightfall; indeed, bread and olives form an extremely nutritive and refreshing diet.

The olive-tree is extremely picturesque and grotesque in its form; the trunk sometimes consisting of a huge mass of decayed wood, with young and graceful branches springing from the top and sides; at other times, a large and bushy tree may be seen supported upon two or more small fragments of the same, apparently dead wood, while the remainder of the trunk is completely hollowed out. The wood burns readily when green, and the leaves emit a strong, sparkling flame, and apparently contain much oil. The ground between the olive-trees is not lost, being frequently sown with grain, and sometimes, though rarely, planted with vines. The deep color of the foliage of this most useful tree gives a solemn character to the landscape, and subdues the usual vivid brilliancy of color—the effect of the clearness of the atmosphere and the heat of the climate. Green, such as adorns our own meadows, is a color never seen in a Portuguese landscape: the scanty herbage, which springs up spontaneously, is burned by the sun into a bright straw-color; and the soil, through the great heat, becomes almost white. On the sides of the hills, however, the beautiful pale purple flower of the wild thyme, and the delicate gray of its leaf, contrast prettily with the surrounding glare; and it is only the olive, with its deep hues and the low, bushy vines, which can claim the name of green. The cultivation of the orange and the lemon is confined chiefly to the neighborhood of large cities, very few groves of these fruits being met with in the open country.

It is with narrow-souled people as with narrow-necked bottles—the less they have in them, the more noise they make in pouring it out.

THE REIGN OF TERROR.



THE Reign of Terror! how many recollections of horror are associated with these words! Even at the distance of more than half a century, the imagination shrinks, the blood curdles at their sound; and centuries hence, that era will probably be regarded as exhibiting the "bloodiest picture in the book of time."

This name was applied to express that period in French history which intervened between the execution of Louis XVI. and the overthrow of Robespierre, to whom mainly it is supposed to have owed its origin. Some terrible scenes had previously been witnessed. In September, 1792, shortly after the overthrow of the monarchy, when the passions of the populace were excited to the highest pitch by the intelligence of the approach of the allied army, a band of assassins had at midday, while the assembly were sitting, proceeded to the various prisons of the metropolis, and there commenced the work of destruction on the inmates. These receptacles had previously been filled with hosts of the highest society in the capital, who had been collected, in terms of a law named that of "suspicion," after a search of three days, during which no one was allowed to leave his residence, but a body of delegated municipal authorities proceeded from house to house, and seized all who fell within its sweeping denunciation. Eighty monks, incarcerated in a temple, were first assailed, and most of them either struck down on the ground, or shot in the trees of an adjoining garden to which they fled for refuge. The great prisons of L'Abbaye, La Force, and the Conciergie, were the next objects of the assassins' fury, and in each the prisoners had their throats cut in hundreds. A sort of mock tribunal was established, and these homicides constituted themselves as judges. The wretched prisoner was brought out alone, and after a few questions from his accusers at one end of the court-yard, he was consigned to the knives of the assassins, who quickly des

patched him at the other. Some telegraph or cant phrase was generally employed as the signal. At the prison of L'Abbaye, for instance, the fatal sentence was the "*à la Force !*" and while the unsuspecting prisoner went on in the supposition that he was to be transferred to that stronghold of incarceration, he was suddenly assailed and put to death amid the laughter of the assassins, who amused themselves with his fearful misapprehension. During three days these terrible scenes proceeded; neither the legislature nor the civic authorities, in the meantime, offering the slightest interruption. The assassins, who did not exceed two hundred in number, throughout the whole period coolly went and returned to their meals, as if they had been engaged in their usual avocations. The women were worse than the men, and either joined actually in the massacre, or stayed at home to discharge the others' duties, that their husbands might, as they said with horrid coolness, "work in the Abbey." Nay, more, when the horrid "work" was completed, they actually had the audacity to proceed to the city hall and demand payment for their deeds—a demand with which the approving or terrified municipality were forced to comply; and the sums paid to these murderous "laborers" for a long time remained a disgrace duly recorded in the civic records of Paris. It is impossible to calculate the number struck down on this occasion in Paris and Versailles, which, with one or two of the smaller towns in the neighborhood, followed the capital's example. By the most moderate calculation they have been reckoned a thousand or twelve hundred, though the list has been swelled to thrice the amount. Many persons of distinction fell during the massacre; among whom were the famous Madame de Barri, mistress of Louis XV., who died uttering the most piercing cries, and exhibiting the most abject, yet natural timidity, and the still more celebrated Princess de Lamballe, whose beauties and virtues had not been able to save her, as the friend of Maria Antoinette, from the fury of the mob. She was put to death under circumstances of peculiar atrocity, and her head was carried aloft on a pike, to be

exhibited before the windows of the queen in the Temple, attachment to whom seems to have been the least of her merits and the chief of her crimes.

But terrible as these scenes in 1792 were, far greater horrors were perpetrated—and in the name of justice, too—in the following year and the first half of 1794, by the sanguinary revolutionary tribunal which had been established by Danton. This dread triumvir himself perished by its agency in the early part of the last-named year, and while bewailing his fate, and that of an amiable woman, who a short time before had been united to him in marriage, he then deeply deplored his instrumentality in its erection, calling the Almighty to witness that he had never contemplated the crimes it had achieved: but his regret (as regret generally is) was unavailing. Shortly after its creation, the revolutionary tribunal commenced its proceedings with the most fearful rapidity, and under the direction of Fouquier Tinville—a sort of fiend in human shape, who laughed and jested with his victims while he sent them to the scaffold—whole hecatombs were soon destroyed. The slightest suspicion was fatal in the eyes of this atrocious wretch, and those who appeared in court as witnesses were frequently sent to the guillotine as criminals. Almost every one tried before him was at length condemned. The Girondists were struck down in a body, on the denunciation of Robespierre; the venerable Malesherbes, for defending the late king, was, with the whole of his family, consigned to the scaffold, to which he proceeded with a gay aspect, and an air so careless, that, chancing to stumble, he said, "it was a bad omen, and a Roman would have turned back." Danton and the whole of his associates were condemned, by the instigation of the same gloomy tyrant, who felt that that bold demagogue formed the chief obstacle to the dictatorship to which he now aspired. He exhibited less courage, and for a moment his feelings seemed about to give way, when he thought of his young wife, of whom he plaintively exclaimed, "I shall never see thee more!" but immediately recovering himself, and uttering the words "Courage, Danton!" he died with

fortitude. Others of a less daring temperament showed still more tranquillity ; and death at last became so common that it lost its terrors. Numbers proceeded to the guillotine uttering jibes and witticisms, often extemporaneous, but in other instances studiously prepared for the occasion ; and the victims at last vied almost in coolness with the crowds, who daily beheld processions to the guillotine with as much indifference, or rather as much zest, as they would have regarded any exhibition at the theatres, which were never more crowded in Paris than during this dismal period.

While such was the state of affairs in the capital, matters were still worse in the provinces. In Paris, condemnation was made a jest, and the names of those who had received sentence were bawled out in a street list, named, with disgusting levity, "the evening paper," from which they frequently, for the first time, received intelligence of their approaching death on the morrow, or were said to have "drawn prizes in the holy lottery of the guillotine;" but in the rural districts, execution itself was made a theme of merriment. In the north, one Lebas, an apostate monk, the revolutionary judge, generally presided at the guillotine with the whole of his friends ; and in the south, another, Le Bon (literally, "the good," and probably a name bestowed in jest), publicly entertained the executioner, as a distinguished functionary, at his table. Horrors scarcely inferior were perpetrated in the other districts of the republic, to which these sanguinary wretches were sent by the revolutionary tribunal in Paris, delegated with all its powers ; and the guillotine at length became so much in demand, that it was proposed to have a set of what were termed "perambulating" machines of death constructed, to move from one part of a province to another, on wheels. Every being, who, by his opposition or his wealth, had excited the indignation or cupidity of these emissaries, was guillotined. Were an old public functionary incorrect in his accounts, or a general unsuccessful with the enemy, he experienced the same fate. Westermann, a fierce republican general ; Biron, a better soldier ; Beauharnois, the husband of the amiable Josephine, Napo-

leon's future emperess, and others of the same rank, were thus struck down ; and the dreadful instrument was at last so familiarized, under the auspices of Fouquier Tinville, that Robespierre himself had to interfere, and declare "it was desecrated."

But even these scenes yielded in horror to the enormities committed in the western part of the kingdom on the unhappy peasantry of La Vendée. Shortly after the revolution broke out, resistance arose to it there. The inhabitants of that sequestered district, where the proprietors, generally inconsiderable, lived chiefly on their own domains, had escaped the severity of the ancient government. Instead of being ground down by the nobles, they lived on a footing of comparative equality, joining in their hunting parties, and participating in their hospitality ; most of the proprietors cultivated their own grounds, or were but little removed in rank above their tenants. Here, accordingly, the new principles met with a steady opposition. Encouraged by their landlords, who were attached to the ancient régime, and instigated by their priests, who were averse to the modern oath, the peasants took the field in bodies, and resisted all who attempted to introduce revolutionary doctrines into their district. Success at first attended their arms. Their habits as hunters having made them experienced marksmen, and their knowledge of the country given them a great advantage over their opponents, they in the outset bore down the republican troops, who, while marching unsuspecting through the forest ravines with which the district teemed, were frequently fired on by unseen foes, and while in confusion, struck down by the peasants, who then rushed from their ambuscade. Whole bodies of men were thus cut off ; and the insurgents, becoming bolder by success, and assembling in larger numbers, at last defeated not only several republican generals, but captured Nantes and some adjacent towns. Under the direction of Larochejacquelein, a young and enthusiastic nobleman ; Charrette, a waggoner ; Stofflet, a barber ; Lescuré, a pious gentleman ; and D'Elbée, an old naval officer, they at last attempted higher aims, and in a body a hundred thousand strong, crossed the Loire with

the design of marching upon Paris. But all their habits and tactics unfitted them for this purpose. They generally took the field for fighting in the same form as they had been accustomed to equip themselves for hunting; seldom carried above three days' provisions with them; and, whether successful or defeated, could rarely be retained for a longer period from home. In conflict, too, they were more successful in sudden and sharp attacks, than qualified to endure the steady and sustained action of regular troops. Hence, in this great excursion, they wholly failed in their object. In several engagements with the republican troops, after varied success, they were finally defeated; Larochejacquelein, their favorite, though not ablest leader, was struck down, and his followers fled, notwithstanding his inspiring war-whoop, "If I fly, shoot me; if I advance, follow me; if I fall, avenge me!" Most of their other generals, being accustomed to charge with their men, were either killed or disabled; and their wives and children having followed them in this excursion, a crowd of a hundred thousand wretched beings were at last found, defeated, dismayed, and disordered, on the banks of the Loire—assailed by the exasperated republicans on the one hand, cut off from their country by the river on the other; abandoned a prey to hunger, cold, wind, hail, and snow; and left to contend with horrors which disposed their superstitious imaginations to surmise the approaching termination of the world in their sinking cause.

It was upon these unhappy wretches, or such of them as had escaped those dangers, that the Jacobin fury was now to be wreaked; and though the peasants themselves had frequently been cruel in putting their prisoners to death, assuredly they never perpetrated such atrocities as those of which they were now the victims. An instrument which, like the guillotine, decapitated only one at a time, was of course wholly unable to act with sufficient promptitude for vengeance; and they were accordingly struck down in scores, and fifties, and hundreds, by musketry and grape-shot. Neither age nor sex was spared on these occasions, though the soldiers, the stern executioners, were fre-

quently interrupted by their victims, when children, clinging to their knees. But even this mode of putting them to death became too tiresome at last; and when the earth was threatened with a pestilence from their putrifying carcases, Carrier, an ex-friar, but now revolutionary pro-consul at Nantes, devised a more horrible plan for destroying them by water. Bands of wretched beings were conveyed in boats, and thrown into the lakes or rivers; and when some of them escaped, or attempted to escape, by swimming, the infernal expedient was chosen of carrying them out enclosed in vessels constructed with false bottoms and closed hatchways for the purpose, when the trap being withdrawn, the waters closed over all. Thousands were thus inhumanly drowned, and these *Noyades*, as they were termed, at last only ceased when the fishes were poisoned by gorging on human flesh, and the waters became not less pestilential than the air.

The public mind at last sickened under these accumulated horrors, and Robespierre's associates in the capital became alarmed by the apprehension that he designed to destroy them in turn, with the view of appropriating power to himself alone. The government of the country had, on the abolition of the monarchy, been vested in two committees—one of which, the committee of public safety, watched over the general interests of the republic; while the other, named that of general safety, was intrusted with the superintendence of Paris alone. It was chiefly in the municipality that the interests of this body lay; but though confined to the capital, and made subservient to the committee of public safety, it had gradually extended its power, and by means of the affiliations or offshoots of the Jacobin club, which were dispersed over every village, acquired an influence throughout all France. And this was the body which Robespierre designed to render instrumental to his views when he had been dismissed from the committee of public safety, in conformity with a law which enjoined that two of the ten members should go out every two months in rotation, or when he had refused to re-enter it in consequence of some quarrel with his colleagues.

To all it was apparent that a death-struggle drew nigh, and both parties prepared for it with the full conviction that their lives were dependent on the issue. The committee trusted to the influence it possessed with the army, whose movements Carnot, the ablest and best of its members, wholly controlled: Robespierre confided in the support of the municipality, and, above all, in that of the Jacobin club. In the convention his power was also great; for that body invariably joined the stronger party, and it had recently supported a law which he brought in chiefly to justify the late massacres, and after passing which he had retired for a month from power, in order, as was supposed, to depopularize his colleagues by the odium of executing it. But this stratagem failed, if it were ever designed, and his retirement proved as fatal to him as a similar retreat had been to Danton. That bold leader of the populace had fallen a victim chiefly to the artifices which Robespierre had employed to undermine him at the Jacobins' in his absence; and he had died exclaiming that in three months his deceiver would follow him to the block. The prediction was fulfilled: the committee of public safety seized the same opportunity to destroy Robespierre, and with the same success. On the 26th of July, 1794, after a month's absence during which his followers had almost worshipped him as a divinity, he reappeared in the convention, and delivered one of those long, mysterious, and ominous addresses with which he was accustomed to usher in his sanguinary proposals. The assembly, slavish as ever, applauded him to the echo as before; but a different reception awaited him when he next day prepared to impeach three of his late associates in the committee of public safety, and several of their adherents in the chamber. These men had in the interval received intelligence of his intentions, and they prepared to defend themselves with the courage of despair. So soon as he renewed his speech, they boldly interrupted him by their hostile acclamations, and Robespierre's voice, for the first time, was silenced in an assembly where it always before had been heard with reverence inspired by dread. The chamber at first

stood mute, like himself, with astonishment; but as the cries of his foes grew louder, and vociferations of "Down with the tyrant!" were heard, it prepared to adopt another course; and when Barrère, a profligate ex-noble, and member of the committee of public safety, who invariably ranged himself with the stronger, and on this occasion had prepared a speech for either side—drew from his pocket and coolly proceeded to deliver a studied report against Robespierre, the cowardly legislature no longer remained uncertain, but fiercely joined in the halloo that struck him down. Foaming at the mouth, Robespierre withdrew, and hastened for safety and succor to his adherents in the municipality and Jacobin club.

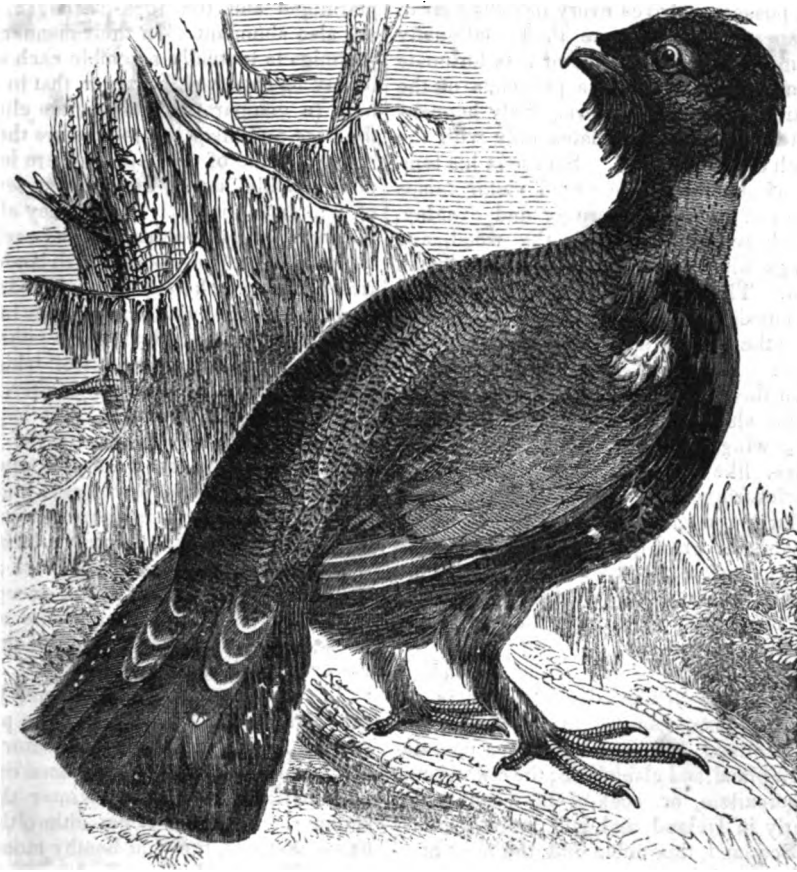
But it was too late. His enemies knew that either his life or theirs must be extinguished in the struggle, and one or more of them had attended the chamber with the resolution of destroying either him or themselves if he carried his proposal. "Should it pass," said they, "we shall have no alternative but to blow out our brains;" and the legislature was soon convinced that its own members were in similar danger. A decree was quickly passed to outlaw him; but there was difficulty in getting parties to execute it; for Henriot, the commander of the Parisian guard, was an adherent of Robespierre's, and already at the town-hall by his side. But fortune, or the frailty of this associate, aided them. Henriot, when he attempted to take the command of his troops, was so inebriated that he with difficulty retained his seat on horseback, and his soldiers either misunderstood his orders or refused to obey him. In these circumstances he rode back in dismay to the city-hall, and his cannoneers were easily persuaded by some members of the legislature to turn their guns from against it to the hostile edifice. A few adherents of the committee or chamber accompanied them, and boldly burst into the room where Robespierre and his associates were. Their triumph was easy: the confederates attempted no resistance; but some of them endeavored to escape by the windows, while others essayed to avoid a public execution by suicide. St. Just, a violent but disinterested fanatic, made this attempt

and failed; his pistol snapped in the act, and was seized before he could renew the effort. Couthon, a sanguinary wretch, who, though half dead with palsy, talked of death and murder in the blandest accents, had not courage to attempt it; and Robespierre's jaw was only shattered by a shot, but whether from his own hands or another's is uncertain. Henriot threw himself from a window, and was found concealed in a sewer. The younger Robespierre, a comparatively innocent man, whose affection for his brother alone betrayed him into danger, was one of the few who conducted himself with dignity, and prepared to die with tranquillity. The whole, amounting to about forty in number, were conducted to the hall of the convention, whence, being already outlawed, they were the next day sent to the guillotine. Robespierre passed the night on a miserable bench in a room adjacent, but though suffering with agony he refused to utter a single word. Next morning, amid the cheers and curses of the populace, among whom were many friends of his recent victims, he was conveyed to the scaffold; and though a momentary outcry escaped his lips when the executioner coarsely tore the bandage from his fractured jaw, he died, the last of his party, with fortitude. With his life the Reign of Terror terminated; and the convention, by whose abject submission it had mainly been caused, shortly afterward made way for a different set of men, and another order of things. The revolution, however, with its gloomy and appalling scenes, did not pass away without teaching mankind these invaluable lessons—that religion is essential to the prosperity of states, and that it is the interest as well as the duty of those in power to promote by all means the happiness of the people.

THE STUDY OF NATURE.

It is impossible that any person, however thoughtless, and unaccustomed to observe the works of creation, can look around him, even during a morning's ramble through the fields, without being struck with the number of living beings that

offer themselves to his notice, presenting infinite diversity of form, and obviously adapted, by their construction and habits, to occupy various and widely-different situations. The careless loungeur, indeed, untaught to mark the less obtrusive and minuter features of the landscape, sees, perhaps, the cattle grazing in the field; watches the swallows as they glance along, or listens with undefined emotions of pleasure to the vocal choir of unseen feathered songsters; and content with these symptoms of life around him, passes unheeding onward. Not so the curious and enlightened wanderer, inquisitive to understand all that he finds around him: his prying eye and mind intelligent, not only can appreciate the grosser beauties of the scene, and gather full enjoyment from the survey, but perceive objects of wonder multiply at every step he takes: the grass, the trees, the flowers, the earth, the air, swarm with innumerable kinds of active living creatures: every stone upturned reveals some insect wonder; nay, the stagnant ditch he knows to be a world wherein incalculable myriads pass their lives, and every drop to swarm with animated atoms, able to proclaim the omnipotent Designer loudly as the stars themselves. Is it upon the seashore that the student of nature walks? Each rippling wave lays at his feet some tribute from the deep, and tells of wonders indescribable—brings corallines and painted shells, and a thousand grotesque beings, samples left to show that in the sea, through all its spacious realms, life still is found—that creatures there exist, more numerous than on the earth itself, all perfect in their construction, and although so diversified in shape and attributes, alike subservient to the general welfare. And yet how few, even at the present day, turn their attention to this wondrous scene, or strive at all to understand the animal creation—to investigate the structure and contrivance that adapt each species to perform certain important duties—to perceive the uses and relations of each group—to contemplate the habits and the instincts that direct the different tribes—and lastly, to trace out the means whereby the mighty whole, formed of such diverse parts, is all along preserved in perfect harmony!



Capercaillie, or Cock-of-the-wood.

THE GROUSE OF EUROPE.



FEW European birds have more points of interest in their history, than those to which we now invite attention. We allude to the grouse strictly so called, excluding the partridges and quails, &c., which Linnæus associated with them in one genus under the name of *tetrao*. Dense pine-forests are the abode of some, others frequent the wild tracks of heath-clad moor-land, while the patches of vegetation

scattered among the high rocky peaks of the bleak mountain afford a congenial residence to others. Patient of cold, and protected during the intense severities of winter by a provision which we shall presently more particularly detail, they relieve by their presence the sternness of the frozen solitude, from which other birds have retired, and give animation to the most desolate scenery.

Their food consists of the tender shoots of pines, the seeds of plants, the berries of various species of *vaccinium*, and *arbutus*, the buds of the birch and alder, leaves and grain. In their habits they are polygamous. At the breeding season draws on, the male birds choose each for

themselves a certain territory, from which the possessor drives every intruding rival. Desperate combats are then continually taking place, the weaker or less fortunate being obliged to quit the precincts of the station; and it not unfrequently happens that the contest terminates only with the death of the defeated. Secure in his temporary dominion, the proud victor raises a call of invitation morning and evening, which resounds through the wood, and brings his bevy of mates to the selected spot. The nest is very simply constructed, consisting of dried grasses, and placed upon the ground, sheltered among the herbage.

In their flight the forest grouse are rapid for short distances, but the motion of their wings is accompanied by a whirring noise, like that of the pheasant. The scarlet-fringed skin above the eye, so peculiar an ornament in the grouse-tribe, they possess in great perfection; the beak is stout, short, and convex; the nostrils are hidden beneath a tuft of close small feathers, enveloping the base of the upper mandible.

Two species of this genus are indigenous in the British islands. One is the black grouse, common in the pine-woods of Scotland, and of the northern counties of England, and elsewhere; the other, is the capercaillie, or cock-of-the-wood. Formerly in Ireland, and still more recently in Scotland, this noble bird, the most magnificent of the whole of the grouse-tribe, was abundant in the larger woods; indiscriminate and wanton slaughter, and an unremitting system of harassment, have caused its extirpation. It still abounds in the pine-forests of various portions of the north of continental Europe, such as Sweden and Norway. Selby informs us, that "the last individual of this species in Scotland was killed, about forty years ago, near Inverness."

We shall now proceed to the next European group, that of the ptarmigan-grouse, or genus *lagopus*. Of this group two species are exclusively indigenous in the British island, namely, the common ptarmigan (*lagopus mutus*), and the red-grouse, or moor-game (*tetrao Scoticus*). The common ptarmigan is not only a native of Scotland, but of the higher latitudes of

continental Europe, where the willow-ptarmigan and the rock-ptarmigan, &c., are also abundant. In their manners, the ptarmigans mutually resemble each other. It may be observed, however, that in Scotland (a comparatively temperate climate) the bare and bleak mountains are the permanent abode of the species there indigenous; while, under the intense severity of winter in the polar circle, they all quit the more exposed situations and seek the willows and copse-woods which border the rivers, and stretch over the sheltered vales. Mountain-berries and heath-shoots in summer, spring-buds and leaves in winter, constitute their food, in search of which, as well as for the sake of shelter, they burrow beneath the snow. Perhaps the changes of plumage in none of the feathered races are more worthy of attention than those which the ptarmigans undergo. Their full summer plumage is of a yellow, more or less inclining to brown, beautifully barred with zigzag lines of black; their winter plumage is pure white, except that the outer tail-feathers, the shafts of the quills, and, in one species, a streak from the eye to the beak, are black.

The red-grouse or moor-game, undergoes no change of color like the ptarmigan; it however acquires a greater mass of clothing, and its legs are more covered with hairlike feathers in winter than in summer. It would seem either that its native districts, the wild heathy moorlands of the British islands, afford more shelter than the favorite localities of the ptarmigan, or that its system needs not this change in order to enable it to resist the cold. It is somewhat singular that this beautiful bird should not be known on the continent, abundant as it is on the moorlands of Scotland, England, and Ireland. Its value, as game, need not be pointed out. Our readers must not suppose that the two forms of grouse to which we have alluded are all that exist; on the contrary, as in every other group of nature, there are here also some which lead off (or indicate affinities) to other groups, forming links in the chain of being. Of these we may allude to the *uropasianus* of North America, and the sand-grouse (*ptercles*) of the arid stony tracts of Turkey, Spain, and Africa.



Partridge Grouse.

THE LOVE OF LIFE,

ITS USES AND LIMITS.



HE love of life may be justly reckoned one of the strongest principles in our constitution. It operates under every variety of circumstances, and with a power and energy peculiarly its own. "It corresponds," as has been truly said, "in the animated world, with the great principle of gravitation in the material system, or with the centripetal force by which the planets are retained in their proper orbits, and resist their opposite tendency to fly off from the centre. The most wretched, not less than the most prosperous—those who seem to possess nothing that can render life desirable, not less than those who are surrounded by all its pleasures—are bound to life as by a principle of central attraction, which extends its influence to the last moments of expiring nature."

It is, perhaps, not sufficiently considered how much we owe to this strong constitutional sentiment. The love of life! It is the arm that guards the temple of our being. It is the wall of fire that surrounds our earthly existence. It is the sentinel, ever wakeful, ever at its post, giving notice of the first approach of danger, and summoning all the sister powers to aid and action. But for the strength of this instinct, can we doubt that the number would be anything but small of those who, not influenced by higher and more sacred considerations, would seek a shelter from the calamities of the present scene in the grave of the suicide? Besides, the anxiety we feel for the continued health and protracted existence of those whom Providence has consigned to our care, would be extirpated; for what we felt of little consequence to ourselves, we would cease to wish for in the case of others. The absence of this ardent attachment to life, or even its existence in a feeble state, would thus tend inevitably to impair all our kindly and generous sympathies, make affection a meaningless word, and leave the weak and the helpless of every class without friends and without guar-

dians. Did we, moreover, cease to prize our being as a boon of peerless price, one great motive to industrious exertion would be destroyed; the sweat of our brows we would regard as too dear a price to pay for our daily bread; many of our noblest enterprises would never be undertaken; and the arts and sciences, the main object of which is to exalt and embellish life, would cease to be cultivated, or at least they would be cultivated with little care. And then what a scene of crime and consequent wretchedness would our world be, if composed chiefly, or rather exclusively, of idlers!

The restraints of law, too, would be stripped of more than half their power. The minds of men, losing the horror with which, instinctively, they recoil at the deed of the assassin, would regard the invasion of life as a crime of comparatively small moment, and thus society would be deprived of one of its most important safeguards. In a similar ratio, and from a like cause, war, even at present a dire evil, would increase—that "game which," to employ the words of the gentle Cowper, "were their subjects wise, kings would not play at," would become the universal pastime. We can, in truth, conceive few calamities more dismal than the extinction, could it be effected, of the dread with which death is contemplated by the mind of man. The arrangement is beautiful and wise, that death should be the "king of terrors."

The love of life, too, has its religious uses. It furnishes a strong presumption of our immortality. It proclaims the horror with which we recoil from the idea of annihilation. It whispers to us that some part of us is far too good to be consigned to the dust. It is, in fact, the voice of the soul, announcing its own grandeur and indestructibility.

Life is dear to us for a thousand reasons. We cling with intense fondness to the familiar objects around us: they become, in truth, a part of ourselves, and it costs the heart a violent wrench to be torn from them. The fair, blue heavens—the royal sun—night, with its twinkling stars—the landscape, with its charms—ocean, sleeping in beauty or lashed by tempest—the scenes of childhood and youth—the

faces around our hearth—it is not poetry, reader, it is nature that bids us prize the boon of being :—

"For who, to dull forgetfulness a prey,
This pleasing, anxious being e'er resigned,
Left the warm precincts of the cheerful day,
Nor cast one longing, ling'ring look behind?"

But the love of life has its limits as well as its uses. It may be vanquished; it may be expelled the bosom by higher and more powerful sentiments. The human family were defamed when a certain authority declared, "All that a man hath will he give for his life."—"Your master," said the brave Carmathian to those who waited on him, "*is at the head of thirty thousand soldiers: three such men as these are wanting in his host;*" while, at the same time, accosting three of his champions, he commanded the first to plunge a dagger into his breast, the second to leap into the Tigris, and the third to cast himself headlong down a precipice. His orders were instantly, and without a murmur, obeyed. In this and kindred incidents, we see the love of life giving way to another, we wont say a more exalted sentiment.

But there are other and far higher displays of this mastery. We see it conquered often by the thirst for knowledge, especially when that is associated with the thirst for distinction. There is a numerous, and in many respects a noble class, who enrich their understandings at the expense, may we not say the sacrifice, of their existence. There are intellectual martyrs, even as Galileo was, when sickening in his dungeon for maintaining that our globe was not the centre of the planetary system. There are men whose devotion to study is maintained at the peril of life. They realize the words applied to Henry Kirke White by a brother poet:—

"He cursed the plian which impelled the steel."

They are sad comments on the wise man's statement—"Much study is a weariness of the flesh." Is it too much to say that these have conquered their love of life, or at any rate, got it subordinated to other ends? By no means. We are told of Achilles that he had two alternatives set before him—to die covered with glory won on the plains of Troy, or to pass a long life without renown in the

place of his nativity. We can conceive of such an alternative having been submitted, at the commencement of their intellectual career, to some as illustrious for genius as the hero of the Iliad was for feats of arms. We can conceive the question proposed to many whose names are now identified with the most brilliant intellectual achievements of our kind, whether they would go to an early grave, or lose those delights and those honors, which scientific research, the labors of art, or the flights of imagination, would be sure to win for them. And we plead that the former alternative would have been preferred. Would Milton have sacrificed, for a paltry addition of twenty years to his tuck of life, the superb visions that crowded thickly on his soul while he meditated his great epic, and gave it to the world in the proud consciousness, as he said, that posterity "would not willingly let it die"? Would Newton have changed ages with Methuselah, if his nine-hundred and ninety-nine years had cost him the glory of the discoverer of gravitation? Would Byron, though skeptical of another world, have "ripened hoar with time," and for this have been contented to go down to the dust, leaving no name that "made an epitaph"? Would Franklin have sacrificed his fame as the man who "sketched the constitution of a continent with one hand, while with the other he drew the lightning from the clouds," for ages of inglorious ease? The tenacity with which we cling to existence is indeed strong; but we do not hesitate to say, that in minds of the higher order, the love of knowledge, when, especially, it is associated with the thirst for renown, is still stronger.

Then the love of life is frequently mastered and displaced by the affections; we allude to the benevolent and patriotic emotions, but more especially to our domestic sympathies. We allow, indeed, that in cases such as those we are about to mention, there may be a mixture and conflict of motives—a portion of alloy mixed with the pure gold. But what of it? Our admiration of mankind will be limited indeed, if we accord it to none of their actions save those that flow from motives quite unadulterated. This apart then, we

find that the love of life often yields to purer and more exalted affections. The gallant seaman, braving the lash of the tempest or the scorplings of the fire alone, that he may rescue the tenants of his bark from a grave in the deep—the devoted soldier, interposing his own person and receiving the stroke that would have killed his leader—the patriot facing the dangers of the field that he may protect the honor and independence of his country—the Christian missionary, toiling and dying in the sublime cause of the world's evangelization—these, and such as these, attest that the love of life, however strong, may be conquered. So that, while the names of Leonidas, of Wallace, and of Tell, adorn the page of history—while those of Howard and other benefactors of their race live in the memory of mankind—while the “Martyr of Erromango” is not forgotten, we shall not want proof of this.

Then there are what we have called our domestic sympathies. One page of Roman story tells us of two friends, Damon and Pythias, whose attachment was so heroically strong, that either of them could have died for the other: here the love of life was subdued by the ardor of friendship. The case of the citizens of Calais will also suggest itself to the mind of the reader. And, to speak more directly in reference to our domestic sympathies, where is the mother who would not brave death to snatch the infant of her bosom from impending destruction? where the father who would not peril his own life to save that of his son? or the brother who could endure an existence purchased by pusillanimous exemption from a danger which proved fatal to a sister? Exceptions there may be; still, we plead, the rule is on that side most honorable to our nature.

Attachment to principle, too, will dethrone the love of life. We need not name the thousands who have not “reckoned their lives dear to them,” for the testimony they held—the noble army of martyrs, who

“Lived unknown,
Till persecution dragged them into fame,
And chased them up to heaven.”

They braved the lion, they dared the stake,
they quaffed the boiling lead, rather than

prove recreant to the cause of sacred truth. Their scorn, shall we call it, of life, was noble, when, to have preserved it they must have parted with what was far dearer to them—a good conscience.

It is beautifully and wisely arranged, that our attachment to life should be ardent; but it would be dishonoring to us to suppose that it can not be surmounted. We have, in these remarks, endeavored to indicate both the uses of this great law of nature, and also its limits.

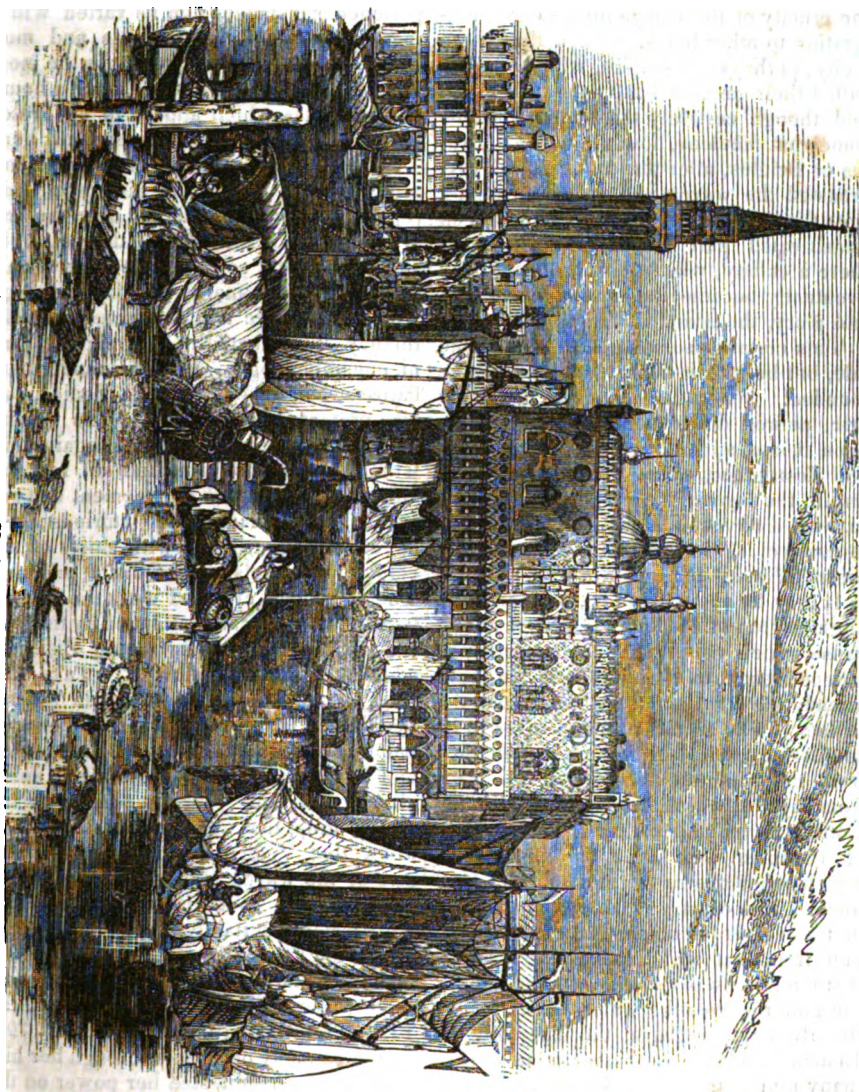
THE CITY ON THE SEA.

IN Venice Tasso's echoes are no more,
And silent rows the songless gondoller;
Her palaces are crumbling to the shore,
And music meets not always now the ear.
Those days are gone, but beauty still is here.
States fall, hearts fade, but Nature doth not die,
Nor yet forget how Venice once was dear,
The pleasant place of all festivity.
The revel of the earth, the masque of Italy.
But unto us she bath a spell beyond
Her name in story and her long array
Of mighty shadows, where dim forms despond
Above the dogeless city's vanished sway.
Ours is a trophy which will not decay
With the Rialto; Shylock and the Moor,
And Pierre, can not be swept, worn away,
The key-stones of the arch, though all were o'er—
For us repeopled were the solitary shore.

BYRON'S CHILDE HAROLD.



T may be said with equal truth of empires, that which a very high authority has said of man. We all do fade as a leaf, and the various dynasties of time which have blazed, waned, and expired, do all attest the fact. But there is a view of the analogy which is very seldom taken; and if empires fade, they fade as a leaf, they do not die. Nothing in nature dies—the leaf which falls to the ground may appear to be an insignificant thing, and as it perishes from human observation, it may excite no interest or attention; but we are stating nothing which our readers have heard for the first time, when we remind them that the leaf does not perish. With thousands and myriads of its fellows it is carried along, and thus contributes to the forma-



Venice.

tion of the mighty deltas which are to be the future empires of the globe. And empires can not be said to die. How many instances does history afford to our minds of the relics of the empire escaping from the cruelty of the conqueror's sword; emigrating to other lands, and founding there a city, perhaps an empire, which has rivalled their ancient birthplace. We are told, though certainly the account seems somewhat fabulous, how the bark of Brutus or Briutus, after the conquest of Troy, breasted the waves and rode in triumph over the stormy billows, and landing on an uncultivated part of the coast, founded there a colony, which took his name, and eventually became the seat of commerce and glory, the island of Britain.

This certainly seems not an improbable tale, but be it as it may, thus was Venice founded. When the Visigoths, under Alaric, poured down from their mountains upon Rome, spreading around them death and destruction, a few refugees escaped, and in the lagoon or mouth of the Adriatic, built a city which commanded the admiration of all Europe, and held at once the sword of state and terror.

It may be as well, before we pass to a slight sketch of the city to notice the chief cause which contributed to its far-famed independency, to which indeed we have already adverted when we mentioned the lagoon. The Adriatic gulf receives in its southern part all the waters which flow from the southern declivity of the Alps from the Po, which has its source in the Cottian range, and collects all the waters of Piedmont and Milan to the Lisonzo, which originates in the mountains of Carniola. The estuary of the most southern of these rivers is above thirty leagues distant from that which lies furthest northward, and between these extreme points, the gulf receives the waters of the Adige, the Brenta, the Paive, the Livenza, the Lemene, and the Tagliamento, as well as many other streams of less importance: every one of them carries down in the rainy season immense quantities of mud, sand, etc., etc.; so that the head of the gulf, gradually piled up with these deposits, is neither sea nor land. This vast estuary is called the lagoon; it comprises a space between twenty and thirty miles

from the shore, and is inaccessible to tempest and storm, though the wild waves of the sea burst with fury against the shores. Amid the tortuous channels of the lagoon, the pilot finds no pathway unless long experience has taught him its varied windings. Yet amid these shoals and mud banks, there have been from ages the most remote, individuals who have found a home on some sites which appear to be firmer and more staple than others, and here Venice eventually raised her glory and renown. In tracing the history of this republic, the empire she had over the sea is clearly distinguished. In the year 558, she possessed a considerable navy of galleys. Gibbon remarks that her marriage with the Adriatic was contracted in early infancy, it originated in the reign of Ziani, one of her doges. Pope Alexander Barbarossa, had taken refuge at Venice, and was protected by the state. The emperor sent a considerable fleet against it, which, under the command of his son Otho, in an obstinate engagement that ensued, the Venetians were victorious; Ziani returned in triumph with thirty of the emperor's vessels, and Otho a prisoner. The shore was crowded with the inhabitants—the pope came attended by the senate and clergy, and embracing Ziani, he addressed him as follows: "Take this ring, use it as a chain to retain the sea henceforth in subjection to the Venetian empire, espouse the sea with the ring, and let the marriage be solemnized annually by you and your successors to the end of time, that the latest posterity may know that Venice had acquired the empire of the waves, and that the sea is subjected to you as a wife to her husband." This speech, certainly a very foolish one, to say the best of it, elicited the greatest applause, and the ceremony of the marriage was performed every year until the French terminated the mummery in 1798.

Yet on many occasions through her history, Venice manifested her power on the ocean. In 804 they employed large ships-of-war, with which they repulsed Pepin the son of Charlemagne, who himself confessed their sovereignty. The following century they had three-masted square-built ships, carrying from 1,200 to 2,000 tons. At the period of their greatest prosperity

in the fifteenth century, they had thirty-three ships-of-war, besides merchantmen; 36,000 seamen, and 16,000 artificers employed in the finest arsenal then in Europe—they first acquired a lordship of Dalmatia, and pursued subsequently a steady course of aggrandizement. The fourteenth century was remarkable for the struggle between the Venetian and Ligurian republics, which threatened at one time to reduce the Roman empire to a province of Genoa, and to annihilate the trade, and perhaps the existence of Venice. Venice was reduced to the lowest ebb after the battle of Pola, and the taking of Chioza on the 16th of August, by the united armaments of the Genoese and Francesco di Carrara, when she called from her dungeons the only man able to save her, and he did save her. Confined by the ingratitude of his country, he nobly and magnanimously forgot the wrongs he might have avenged—this man was Vetior Pisani. The Venetians conquered the Genoese, and on the 24th of June, 1380, the doge Contarini made his triumphal entry into Chioza.

To trace the dignity to which it attained in the fifteenth century, its accessions to mighty power, and the envy it excited in the courts of Europe, requires a greater space than can be allotted to this article; and as many of the more interesting of its historical features will pass the eye in surveying its public buildings, we may pass through the period of its greatness, to the era of its declining power, and the conquest by the French republic, when it fell without a struggle for its liberty. One of the most singular features in the Venetian history, is the inquisition of state—that corrupt and despotic government, which, under any other name than that of republic, would have been regarded with universal execration. Imagination fails in endeavoring to conceive a council who carried on their deeds of darkness with such privacy. The bridge which led to these awful dungeons and chambers of gloom, was called the Bridge of Sighs. Would you visit the supreme council chamber, endeavor to imagine a room wide and lofty, black tapestry hanging all around it, and the ceiling covered with terrific figures from the pencil of Tinter-

etto, depicting the various virtues, bearing in their hands the instruments of torture used by the tribunal.* Oh, what scenes has this room witnessed! how many innocent victims to caprice and revenge have suffered here! There are two doors to this apartment, one through which the prisoner was conducted to the tribunal—one through which, if guilty, he was conducted from it. These chambers were opened by the French government, immediately upon the surrender of the republic, as well as the dungeons beneath. These dungeons are entered by a trap-door, and a chilly dread creeps over the heart, as one remembers the fate of thousands of those who entered these dread abodes. Vaulted passages, where neither light nor air can penetrate—rooms whose vaults and roofs are cased with iron, each with its broad wooden board, serving at once the purpose of chair, table, and bed, and the apartment terminating the series of dungeons, from which, if a prisoner once enter, he returns no more—the room where he was strangled, the room whence his body was cast into the canal beneath.

This government of Venice consisted of a doge, who was an elected magistrate, and different councils of the nobles, in whose hands the chief magistrate was a mere pageant of state, likely to have his most private affairs investigated by the haughty aristocracy. The inhabitants of Venice were slaves to the will of their tyrants. No discussion of political matters was allowed, and anonymous accusations were received and acted upon—the accusations being placed in the mouth of the lion standing in the Place of St. Mark. The following anecdote will convey an idea of the despotic nature of the Venetian government. An English gentleman

* In the armory of the arsenal at Venice, are preserved four instruments of torture employed by the Councils of the Three and of the Ten, for wresting confession from the victims. The first is an iron helmet, which was forced upon the head of the victim intended for torture. He was seated, bound to a chair, and through various little holes, sharp instruments were thrust into his head behind his ear, and in his shoulders. Another instrument is an iron collar, bristled with spikes which were poisoned. The third is a thumb-screw of peculiar construction, capable of giving a refinement of torture; and the fourth is a pair of pincers, which, when heated, were used by the torturer for tearing the flesh.

one day entered into conversation with a Neapolitan at one of the taverns of the city, and the discourse happening to turn upon the Venetian government, the Neapolitan greatly condemned, while the Englishman as warmly commended, some of its institutions. In the middle of the night, the Englishman was aroused by a loud knocking at the door of his hotel, and presently after, the officers of justice entered his apartment, and commanded him to rise. As soon as he was dressed, a handkerchief was bound over his eyes, and he was put on board a gondola. After being rowed for some time, he was landed, and led through long passages until he reached a large hall, where his eyes were unbound, and he was desired to notice what he saw. The Neapolitan was suspended from a beam by the neck. Shocked at the sight, he inquired its meaning, and was informed that he was thus punished for the free animadversions he had made on the Venetian government, and that although the Englishman had refuted his arguments, the republic was displeased with him for entering on such a topic, as it needed no advocates, and commanded him to quit its territories on pain of death. His eyes were again covered, and he was taken back to his hotel, where he lost no time in preparing for his departure, having no wish to remain in a city where political discussion was attended with such dangers.

But the great centre of attraction at Venice is the Place of St. Mark; and the principal objects which here meet the eye, are the Cathedral, Orologio, and the Campanile, the latter seeming to be appendages to the main edifice. In front of the church are three tall, red poles, looking like masts, from which, in former days, the flags of the vassal kingdoms of Candia, Cyprus, and the Morea, waved; they are still decorated on festival-days with gay streamers. Over the porch of the Orologio stands the admirable clock, celebrated next to Strasburgh for its many movements, among which, about twelve and six, which are the hours of Ave Maria, when all the town are on their knees, the three kings come forth, led by a star, and passing by the image of Christ in his mother's arms, do them reverence, and

enter the clock by another door. At the top of this turret, another automaton strikes the quarters. The Campanile is a heavy and heterogeneous pile, neither grand nor beautiful. It was built when the imaginations of the Venetians were full of Constantinople, and the exploits of Dandolo; most of its materials came from Greece, and the architects, as well as architecture, were Byzantine. It was here that Galileo studied at the period when the persecutions of the Romish church would have dimmed the lustre of the heavens from which he was drawing conclusions so sublime and important. The church of St. Mark is, without exaggeration, the most intensely glorious in its internal construction and adornment, that the eye has ever seen or that the imagination has ever conceived. Columns of porphyry, verd antique, and oriental marbles; the pavements composed of minute pieces of white and colored marbles, jasper, agate, lapis lazuli, etc., variously, and for the most part, beautifully disposed: the inlaid ornaments and gilded capitals produce altogether astonishment and admiration. This temple is adapted for nocturnal illumination, and when brilliantly lighted up, its effect must be splendid in the extreme. The Piazza is the only place in Venice where those things which we vulgarly call legs, but for which a Venetian has no use, can be used, every excursion in Venice being by water; but if it should occur to the mind that the leg may be used, the Piazza is the place of promenade, and the associations connected with that small spot of earth are deeply interesting. Here were celebrated the great fair, the carnival, the ceremonials of the church, the triumphs of the state; here the stage was erected for the juggler, the scaffold for the executioner—

"The sea, that emblem of uncertainty,
Changed not so fast for many and many an age
As this small spot. To-day teems full of masks,
And lo, the madness of the carnival!
The monk, the nun, the holy legate masked;
To-morrow comes the scaffold and the wheel,
And he died then by torchlight, bound and gagged,
Whose name and crime they knew not."

[ROBERTS.]

The bridge of the Rialto is interesting; the mind immediately associates it with Shakspeare. It was designed by Antonio



The Rialto.

da Ponte, the architect of the public prison. Oh, Venice! Venice! as we walk thy streets, how our thoughts roll back to the days of thy glory, when thy winged lion, which even now

"Stands as in mockery of its withered power,"

was an emblem of the sweep of thy magnificence and empire, to which, as to the monarch of the forest, the nations around thee bowed. I walk upon the quay of the Piazzetta, but no lordly procession meets my view, as in the days of the proud pontiff, Alexander the third. It was here the Suabian sued, here the proud ecclesiastic knelt upon his neck—it is here the Austrian eagle hovers, and triumphs over the impotency of thy power. I trace thy history, and I find that, not only now, but even in thy greatness, thou wast a slave—a slave through thy three hundred years of stormy democracy—a slave beneath thy close, hereditary aristocracy—a slave beneath the despotism of the succeeding oligarchy, and more a slave then than now. I enter the "Sala del Gran Consiglio" of thy ducal palace—I see the proud old portraits of each doge. Gazing upon me, they interest not my attention; they claim not my admiration. That black vacancy, intended for disgrace, is a more noble memorial than all; the "Locus Marini Falieri Decapitati," is a noble evidence that one Venetian once lived, who sought to free his country from the bonds of slavery.

Yet, Venice, thy name inspires associations of splendor, and a brilliancy gathers over even thy slavery, as we think of thee—when we think of the aspirations of Galileo; how the gray-haired and venerable old man watched the silent planets from thy Campanile—of Paul Veronese, and Titian, and the Palmas, and Tinteretto, who called forth the images which breathe on their canvass beneath thy skies—of Petrarch, who sung of Laura amid thy crowded buildings; and thou hast in thy territory his dust; he sleeps at Arqua. Thy glorious churches, thy statues, thy immortal tombs, and thy gondoliers, stealing like shadows over the waters—although

"In Venice, Tasso's strains are heard no more,"

all these are thy glory, and thy glory they must ever remain, more elevated than others; and it was upon these obscure and sequestered spots that Venice eventually raised her glory and renown.

Venice presents to the mind an aspect partially of venerable antiquity, partially of modern European pre-eminence; it is, in point of fact, as Sismondi remarks in his "History of Italian republics," "the link which connects ancient and modern history;" and when we think or read of Venice, a dreamy grandeur and a solemn sublimity gathers over the page and before the eye; when all the elements of government, if government such a state of policy can be called, were riding like miserable wrecks on the billowy commotion of the storm, and ignorantly elevating the conductor which was to call the lightning that eventually struck them. At that moment Venice rose, and her eye glanced along the future and the past. The western Rome was her parent; she saw each dying struggle for the returning triumph, and the last laurels withered in her eye. She saw the eastern empire first wave its sceptre; alternately its friend and its foe, she accelerated or retarded its glory; she triumphed at last over its disgrace, and in its death-pangs divided the spoil with the strong. She saw the French power rise when Clovis conquered Gaul. The Ostrogothic and the Visigothic powers, their glory and their gloom were alike beheld by her. The continent seemed shaken; she alone seemed to stand immovable; at last she fell; the proud republic gave way, "and the state," says Sismondi, "which linked the present with the past, and joined the two eras of the world's civilization, ceased to exist."

We annex an account of the gondola, or boat, employed in traversing the marine streets or canals of Venice.

The length of this beautiful boat is nearly thirty feet, and the breadth about five; and it affords accommodations for six passengers, beside the two rowers. Some, however, are much smaller, and are rowed by one person. The gondola is flat-bottomed, and its sides slope away considerably, particularly toward the after part, which, when the boat is empty, rises high out of the water. The seats, which

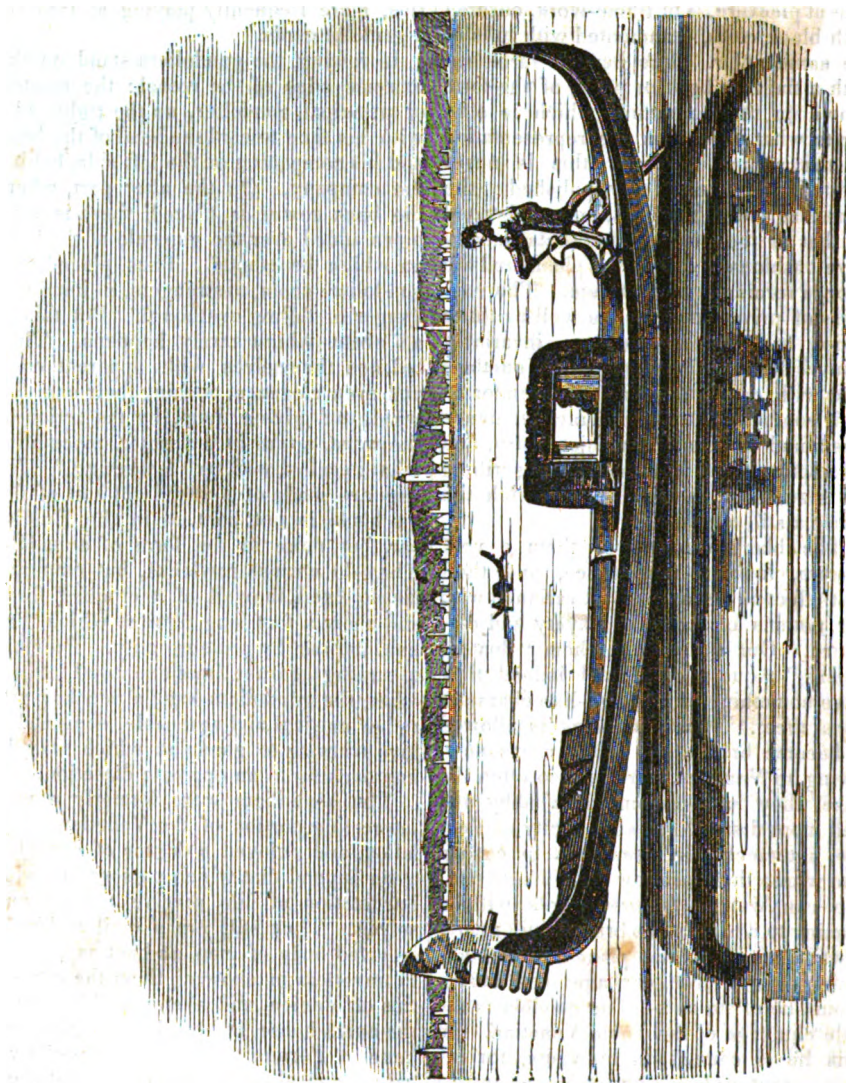
are placed at a distance of something less than two thirds the length of the boat from its head, have a tilt over them, with windows and curtains. This tilt, which is extremely light and elegant, and removable at pleasure, is of frame-work, covered with black cloth, ornamented with tufts of the same color. The head is furnished with a flat iron beak or prow, of the form shown in the engraving, which is similar to what is seen in the representation of the ancient galleys; this is never painted, but kept highly polished: the stern has a wooden beak, not so elevated as that at the head. The seats usually have cushions covered with plush, and the floor is furnished with carpets. The gondolas of private persons, as well as those which are let for hire, are invariably painted black. Formerly the Venetians vied with each other in the splendor of their gondolas, but so much inconvenience was found to result from this rivalry, that a sumptuary law was issued, prescribing the size, form, and color, in which the gondola still appears.

The black color gives them a very sombre, funereal appearance, and their first effect on strangers is at variance with our notions of Venetian gayety and elegance. Our sailors call them "floating coffins," "queer craft," and indeed they have something of a hearse-like character about them. When the black is allowed to become brown and rusty, as is now, owing to Venetian poverty, too often the case, they look particularly shabby and still more dismal. In such a city as Venice, intersected in every part by canals, and where there are few parts where people can walk a hundred yards without coming to a high, steep bridge, built nearly always, not in inclined planes, but in steps rising over an arch, carriages and horses would be of no use. The gondola is the sole equipage of the noble Venetian. In this he is carried on his visits, for his amusement, or to his business, and in this a considerable part of his time is passed. His head gondolier is to him what the head coachman and the groom are to an English gentleman, and something more. When he wishes to go out, he does not order "the horses to be put to," but the gondola to be got ready. As the fares

are low, even the poorest people make frequent use of these boats, and on a saint's day, or other holyday, they are seen gliding in all directions, their occupants sometimes conversing or listening to stories, more frequently playing at tarocco, a game at cards.

In rowing, the gondoliers stand on the extreme edge of the vessel: the master, or principal gondolier, on the right side, with his face toward the head of the boat, and his companion on the left side, behind the company. On the after part, where the back rower is placed, there is a flat piece added over the gunwale of the boat, on which he stands. Thus placed, the gondoliers seem, to strangers, in imminent danger of falling overboard. But this is an event which rarely happens. They balance themselves with apparent ease, and even elegance, pushing their oars forward, and giving them, by the action of the wrist, a turn in the water, resembling what is called with us "feathering." The oars are made of a very light sort of fir; the blade is not bent, as in the English oar, but more in the form of a paddle. They do not use rowlocks, but employ a single fixed thowell, of a crooked form, and about a foot long, against which they hold the oar by pressure only. Previous to turning a corner, from one canal into another, the gondoliers have a peculiar cry, rather musical and agreeable, designed to give warning to gondolas which may be approaching in an opposite direction.

The gondoliers were formerly a very interesting portion of the Venetian population, and enjoyed a degree of consideration beyond that which persons in a similar station of life receive among ourselves. They still are a civil and well-behaved body of men, and act as *ciceroni* to travellers in showing them the curiosities of Venice, and even go with them to the opera-house, and conduct them to their boxes. Formerly they made the city vocal; for in gliding through its canals, and at other times, they sang to one another, in alternate stanzas, passages chiefly from Tasso, translated into the Venetian dialect. The verses they sang were almost invariably taken from Tasso, and rarely from Ariosto or any other poet. The motives for this decided preference have been



Gondola, with a Single Row.

reasonably assigned by several writers to the circumstance of Tasso's "epic," relating to the wars of the Crusades, where the crescent of Mohamet was made to wax pale before the Christian cross, and to the antipathy, arising from long warfare, both by land and sea, both in Europe and Asia, that has existed between the Venetians and the Turks. Shakspeare's Othello will show, as well as any historical record could do, how violent was this feeling. To this may be added that the Venetians, even down to our own day, have continued an intimate intercourse with Syria, the Holy Land, Turkey, and all the Levant, and are thus the better prepared to enjoy Tasso's brilliant and beautiful pictures of the "orient."

The melody thus sung was calculated for remote effect; and when the gondoliers of distant vessels sung to each other in alternate verses, the sound, as it came "by distance made more sweet," was singularly pleasing. Speaking of this vocal performance, it is said, in a note to the fourth canto of "Childe Harold": "It suits particularly well with an idle, solitary mariner, lying at length in his vessel, at rest on one of these canals, waiting for his company or for a fare, the tiresomeness of which situation is somewhat alleviated by the songs and poetical stories he has in memory. He often raises his voice as loud as he can, which extends itself to a vast distance over the tranquil mirror; and as all is still around, he is, as it were, in a solitude in the midst of a large and populous town. Here is no rattling of carriages, no noise of foot passengers: a silent gondola glides now and then by him, of which the splashings of the oars are scarcely to be heard. At a distance he hears another, perhaps utterly unknown to him. Melody and verse immediately attach the two strangers; he becomes the responsive echo to the former, and exerts himself to be heard as he had heard the other. By a tacit convention they alternate verse for verse: though the song should last the whole night through, they entertain themselves without fatigue, and the hearers, who are passing between the two, take part in the amusement." But this interesting practice has declined with the prosperity and independence of Venice.

THE OCELOT.



HIS beautiful animal is a native of Chili and Mexico. The ocelot was known to the natives of South America by the name of *tlalocelottl*, from which, by abbrevia-

tion, we have derived a cognomen less difficult to pronounce, and which, at the same time does not much differ from the original designation. In size the ocelot is about three feet in length and eighteen inches in height. The legs are long; ears somewhat broad, and sometimes tipped with a few hairs. Upon a gray ground are oblong, fawn-colored patches of a dark color, surrounded with a border perfectly black. At the top of the back there is a continuous, dark line, and the tail is beautifully spotted. The under part of the body is white, with spots of fawn which extend to the feet. The skin of the male ocelot exceeds that of the tiger in beauty and variety, and in brightness and regularity of the spots it is much superior to the leopard. In this respect, the panther or the ounce can not be compared to the ocelot, so that in appearance it is more elegant than those of its tribe which inhabit the old world. In the female the colors of the skin are comparatively dull, and the spots less regular.

The ocelot, like most animals of the cat tribe, is distinguished in its wild state by considerable ferocity, though specimens which have been brought to Europe have exhibited a subdued character. A male and female were brought to Paris in 1764 by M. Lescot, who had taken them when quite young. It rarely attacks man, and fears dogs, and when pursued, seeks safety in flight, endeavoring to elude its assailants by mounting a tree.

The ocelot passes the day in its retreat, but night it prowls about in quest of prey, and under cover of the darkness, it approaches human habitations and enters the farmyard. It sometimes awaits the approach of its prey concealed amid the branches of a tree, and when they are sufficiently near, it springs upon them with unerring aim. It sucks the blood of



The Ocelot.

the animals which it destroys, and therefore commits greater ravages than if its appetite were appeased by feeding upon the flesh of the animals it killed.

In a state of captivity it does not lose much of its natural character. M. Lescot states that he was obliged to confine in a cage the two specimens which he brought over, and which had displayed their savage character at so early a period. He supplied them on the voyage with fresh meat, of which they ate seven or eight pounds a day. The ocelot, like the jaguar, panther, leopard, tiger, and lion, only produces two of its kind at a birth.

RULES FOR JUDGING OF THE WEATHER.



It is agreeable and useful to have a barometer in the house. It is a pleasing companion and friend. Those who notice it daily will soon find that they are not to expect rain when the pointer is at rain, nor fair weather when such is the monitory indication. That which is to be observed is the *course* of the barometer: If yesterday it was at "set fair," and to-day it is down at "fair," rain may fall at any moment; and on the contrary, if it has been at "much rain," and has gradually risen to "rain," fair weather may be calculated upon. The barometer, with observation, is a weather guide; without it, unless in extreme cases, it can not give the information wanted. Perhaps the most infallible indication of the instrument is that of a sudden and extensive fall, when a storm is sure to arise. Attention to this fact has probably more than once saved us from shipwreck or other disasters at sea. We give below the late Dr. Dalton's rules for judging of the weather by the barometer:—

"When the barometer is near the high extreme for the season of the year, there is very little probability of immediate rain.

When the barometer is low for the season, there is seldom a great weight of rain,

though a fair day in such a case is rare. The general tenor of the weather at such times is short, heavy and sudden showers, with squalls of wind from the southwest or northwest.

In summer, after a long continuance of fair weather, with the barometer high, it generally falls gradually, and for one, two, or more days, before there is much appearance of rain. If the fall be sudden and great for the season, it will, probably, be followed by thunder.

When the appearances of the sky are very promising for fair, and the barometer at the same time low, it may be depended upon, the appearances will not continue so long. The face of the sky changes very suddenly on such occasions.

Very dark and dense clouds pass over without rain, when the barometer is high; whereas, when the barometer is low, it sometimes rains, almost without any appearance of clouds.

All appearance being the same, the higher the barometer is, the greater probability of fair weather.

Thunder is almost always preceded by hot weather, and followed by cold and showery weather.

A sudden and extreme change of the temperature of the atmosphere, either from heat to cold or cold to heat, is generally followed by rain within twenty-four hours.

In winter, during a frost, if it begins to snow, the temperature of the air generally rises to 32°, and continues there while the snow falls, after which, if the weather clear up, expect severe cold.

ALGIERS.



ALGIERS is situated in 36° 49' north latitude, 3° 25' east longitude, on the southern shore of the Mediterranean sea, the waves of which wash its walls. It is built

in the form of an irregular triangle, the

base of which is formed by the seacoast. The streets of the town are remarkably narrow, filthy, and uneven; very few of them cross others at right angles, and very few are straight.

The town of Algiers contained thirteen large mosques, with minarets, and about seventy small ones, or chapels, as we should call them, belonging to private individuals. There were also a synagogue for the Jews, and a chapel and hospital for the Christians, the last of which was supported at the expense of the Spanish government. The palace of the deys was in the lower part of the town; but the late dey had his residence within the citadel, at the highest point of the city. The town derives from the country a tolerable supply of water, which is brought to it by an aqueduct, and then distributed by conduits to the different parts of the city. Algiers contains the usual proportion of baths and coffeehouses, but there are none that appear to claim particular notice.

Previously to the French invasion the state of Algiers was nominally subject to the Turkish sultan, but was, in point of fact, perfectly independent. The Turkish dominion at Algiers, originated with the famous Turkish corsair, whom we call Barbarossa, but whose real name was Horush, or Baba (father) Horush, as his men were accustomed to call him. This person was called in by the Algerine Moors in 1516 to assist them against the Spaniards, and availed himself of the opportunity to make himself master of the place; but he ruled so tyrannically, as to provoke the Moors to revolt, and he was killed in 1518, fighting at the head of his Turks. He, however, left a brother to succeed him, who in order to secure his authority, placed himself under the protection of the then mighty Turkish empire the ruler of which, Selim I., appointed him pacha and Regent of Algiers, and sent him a body of Janissaries. From that time the sultan used to appoint the pacha of Algiers, who was at the same time commander of the forces, and to send men and money for the service of the garrison. But in the seventeenth century the Turkish militia obtained the right of choosing their own commander, and of paying themselves out of the revenue of the

regency: the sultan, however, continued to send a pacha, as civil governor, until the beginning of the last century, when Baba Ali Dey, a chief of the militia, seized the then pacha, put him on board a ship, and sent him back to Constantinople. The rebel did not omit to send by the same vessel envoys with rich presents to the vizier and other principal officers of the porte, intimating to them that the rejected pacha had treacherous designs, and that it would be well that the chief of the militia should in future perform the duties of the civil governor also, subject, of course, to the approbation of the sultan. The porte was obliged to wink at this transaction; and from that time, the Janissaries, with their chosen chief, have been absolute masters at Algiers. The dignity of dey was one which the lowest soldier might hope one day to fill; but it was held by a most precarious tenure, as the lives of comparatively few of these military governors have been allowed to reach their natural termination.

MUSIC.



HE musical faculty is not peculiar to man. It abounds in the cries and carollings of many of the inferior tribes. There is music of the most melting and plaintive sort in the notes wherewith the bird whose "little household hath been stolen, fills and saddens all the grove with melodies of deepest pathos." There is a higher and harsher harmony in the scream of the cloud-cleaving eagle, who goes up, singing his own wild song, through the blue ether, and over the arch of the rainbow. There is cheerful and elevating music in the note of the lark, rising aloft in the dewy dawn, and screwing the fresh morning air, which the poet thus apostrophizes:—

"Hail to thee, blithe spirit!—
Bird thou never wert—
That from heaven, or near it,
Pourest thy full heart
In profuse strains of unpremeditated art!



City of Algiers.

"Higher still, and higher,
Through the air thou springest ;
Like a cloud of fire,
The blue deep thou wingest ;
And singing still dost soar, and soaring ever singest."

There is music, who needs to be told, in the note of the nightingale, called by Milton "most musical, most melancholy bird," which trills her soft and tender lays as if to soothe the evening for her grief at the departure of the sun. There is music of the boldest and most masculine kind in the roar of the lion, coming up, vast and hollow, upon the wind of the wilderness, and affrighting the far-off caravan on its solitary way. What a harmony there is in the varied voices of inanimate creation—what a fine pause in the hush of the evening—what a sweet tenor in the lapse of a stream, which, to the "sleeping woods, all night, singeth a quiet tune"—what a shrill treble in the higher notes of the gale singing through the shrouds—and what a tremendous base in the voice of the thunder, speaking from his black orchestra to the echoing heavens! Mrs. Hemans asked Sir Walter Scott if he had not observed that every tree gives out its peculiar sound to the wind? He said he had, and suggested that something might be done, by the union of music and poetry, to imitate those voices of trees, giving a different measure and style to the oak, the pine, the willow. Diversities in this respect may be noticed among the trees of the wood and the garden. From the willow comes a kind of dry, hissing sound—from the oak, a strong, sturdy rustle, as if the old king of the forest, over whom centuries had passed, yielded his head reluctantly to the force of a blast, born and dying that very moment—from the sycamore, with its large leaves, a calm, full murmur, as if the tree were one vast hive of bees (and indeed, so often it is)—from the yew-tree, a funereal wail, as if each leaf were a sigh—and from the pine, a deep, lingering, and most musical sound, well called by a poet, an "old and solemn harmony." So much for the music of nature. We will only allude to the beautiful fancy of the ancients, that from the motions of the heavenly orbs there issued the soft floating of an ethereal and immortal melody which the gross ear of man hears not, but which is audible to

higher and holier spirits; and that thus, literally, do the morning stars sing together. We now know this to be but a fancy, though a fancy of the finest and most poetical kind. We now say rather with Addison, in his beautiful hymn:—

'What though in solemn silence all
Move round the dark terrestrial ball?
What though no real voice, nor sound,
Amid their radiant orbs be found?
In Reason's ear they all rejoice,
And utter forth a glorious voice;
For ever singing, as they shine,
'The Hand that made us is divine.'

Artificial music is divided into two kinds—instrumental and vocal. We are all acquainted with the common kind of instruments from which, by cunning fingers, the soul of music is extracted—the sweet-toned flute, which sounds so finely across a lake or river, in the still evenings of summer—the spirit-stirring, and ear-piercing fife—the deep, reverberating drum—the trumpet, with its long and swelling blast—the piano, with its soft, mellow, and trembling vibrations—the violin, with its cheerful and awakening notes—the lute, with its tender and amorous descant—the harp, consecrated as that instrument which once vibrated to the hands of David, as he sang on the plains of Bethlehem, or poured out his eloquent plaint from the roof of his palace, in the city of the Great King—the guitar, with its light and airy music, transporting our thoughts to the groves of Italy, or to the cork-tree forests of Spain, to the evening lattices of Madrid, or the moonlit waters of Venice—and last, not least, the majestic organ, with its awful volume of sound. But far above these, or all other instruments of music, is that glorious instrument first invented and tuned by Deity himself. We mean the human voice, with its melting cadences, its guttural sounds, its high, clear melody, which, whether it swells or sinks, awakens to rapture or lulls to repose—whether it be grave or gay—whether it issue from the deep pipe of man, or from the softer breast of woman—has something in it sweeter, more noble, natural, and various, than all the music of the grove, than all the melodies of birds and bees, and murmuring of summer waters; or than all the sounds which art has extracted from cold and lifeless instruments.

The origin of music, as of all the arts, is obscure in the mist of ages. In its simplest form, indeed, it must have been as early as the human voice, the tones and cadences of which, as expressive of joy or sorrow, love or fear, are all musical. This natural expression of emotions by sounds, would lead to a repetition of these sounds, and hence, by-and-by, would arise that artificial division of lines which we call rhythm, a love of which is one of the most general principles of the human soul; for it will be found to pervade all tribes, all ages, all classes. It alleviates labor and cheers the heart. Man becomes a rhythmist long before he knows it. Witness the regular strokes of the oar, the smith's hammer, the thrasher's flail, and the dances of the rudest nations. Music, indeed, and dancing, are at first always connected, till, by-and-by, the song is separated from the dance, and instruments, which originally served only to accompany the song, become also the object of a separate art. Some suppose that music began with a desire to imitate the songs of birds, the voices of animals, or the other ordinary sounds of nature. According to this theory, primeval man, walking in the woody wildernesses of the world's young day, and hearing every grove, every bush, every stream, and every meadow, vocal with the low of cows, the bleat of sheep, the hum of bees, the buzz of insects, the song of birds, the voice of breezes, the murmuring of streams, the pattering of rain-drops, the fine waves of melody chasing each other over the summit of the everlasting woods, became ashamed of remaining silent amid such a congregation of song, and began to imitate, as he best could, the melodies by which he was surrounded. Be this as it may, music was at length invented. Surely in an auspicious hour—surely on one of the white days of earth's dark pilgrimage—on one of those days which seem to have lost their way to us from a loftier region—when the air is balmy, the sky cloudless, the sunshine asleep as with excess of gladness, a light breeze warbling over the landscape, and whispering some happy and unutterable tidings in every cowslip's ear—nay, surely, rather in that golden age of the world, of which

the tradition only remains, when the heavens were nearer, the skies clearer, the clouds more gorgeous, the fat of the earth richer, the foam of the sea brighter, than in our degenerate days—when in our groves were still seen the shadows of angels, and on our mountains the footsteps of God—surely then, and not later, was music born. So far as respects the known history of the art, we must consider the rise of vocal and instrumental music as coeval. Perhaps the first instrument invented was the pipe of the shepherd, who had heard the wind whistle among the reeds. It is probable that while warriors early began to utter their war-cry and sing their war-song, that shepherds first cultivated music as an art. According to scripture, Jubal, the son of Lamech, played on musical instruments even before the deluge. He was the "father of those who handle the harp and organ," which proves, not that those instruments bore much resemblance to what we now denominate by the terms harp and organ, but that musical instruments of some sort were then found out, and the art of music cultivated. We find afterward that, among the Hebrews, the character of poet and singer was united in the same individual. One of the oldest songs with instrumental accompaniments is that which Miriam, the sister of Moses, sung after the passage of the Red sea. At the time of David and Solomon, music had reached its highest perfection among the Hebrews, and part of their religious service consisted in chanting solemn psalms, with instrumental accompaniments. In the structure of scripture poetry itself, in a certain parallelism or repetition of the main idea in the different members of a sentence, there was a distinct rhythm and a varied music. In the tomb of Osymandyas, near Thebes, musical instruments have been found; and it has hence been concluded that the Egyptians were acquainted with music two thousand years before Christ. From them, possibly, the Hebrews derived their music. Many beautiful fables are told by the Greeks concerning the origin and history of music in their lovely land. By it, they said, Orpheus tamed the wildest beasts of the desert; and as his lyre sounded, the lurid crest of the serpent

fell, the mane of the lion ceased to bristle, the eye of the tiger ceased to glare; which was probably an allegorical form of expressing the power of the art in softening the most ferocious of human natures. By it, they said, Amphion made the very stones of his projected city arise and form themselves into shapely and stately buildings; and by it, they said, Arion, cast into the sea, compelled a dolphin to bear him on his back in safety to the shore. These, of course, were fables; but they were fables which proved that the power and charms of music were, even at that early age, fully appreciated.

From the sixth century before Christ, music seems to have been studied scientifically. The celebrated Pythagoras invented an instrument for the mathematical determination of sounds, and added an eighth chord to the harp. The Romans were principally fond of martial music; as might have been expected from their warlike tastes. Under the emperors, music became cultivated as an object of luxury. We have all heard of Nero fiddling while Rome was burning; and when he perished "by the justest doom, which him, the world's destroyer, e'er destroyed," five hundred musicians were dismissed. Perhaps, though this would lessen the romance of the story, it was one of these "whose hand, unseen, strewed flowers upon his tomb." The early Christians employed religious songs in their assemblies; and we hear of our blessed Lord himself singing a hymn ere going out to the Mount of Olives. Holy songs, especially, were sung at the Lord's supper, and at their love feasts. In the fourth century, regular psalms were introduced, which were sung from notes, by persons appointed for that purpose. The mode of singing in the primitive churches was sometimes in solo, sometimes alternately, and sometimes by a chorus of the whole assembly. In the fourth century, precentors were appointed to lead the praises of the church. Schools appropriated to singing were instituted somewhat later, and only in a few places. Choirs were gradually introduced in Italy, and contributed greatly to the splendor at least, of religious worship. Italy, indeed, has always been the land of music. Luther, the first

reformer, was an enthusiastic musician; and we owe to him that fine, solemn strain called "Old Hundred." Our readers are familiar with the names of the great musical composers of later times. Haydn, Handel, Bethooven, and Mozart, were among the principal of these. Handel's great piece, the "Messiah," produced, when sung in London, at the close of the last century, a prodigious effect; and it was fine to see old George the Third standing up at its celebration, amid a crowded assembly of his subjects, and bursting into tears. Robert Hall witnessed this with much emotion, and said it seemed a national testimony to the truth of Christianity. Of Mozart, the great German composer, singular stories are told. His sensibility to the finest differences of tones was so exquisite as often to cause him much pain. The sound of the trumpet, on one occasion, so affected him that he fell to the ground, pale, lifeless, and convulsed. He was the most absent, careless, and childish of men, till seated at his piano, when he seemed to become inspired.

We may now specify some of the pleasures and powers of music. We have been now shaken with laughter at some ludicrous ditty, which made us, for the time, forget our poverty, and remember our misery no more; and again we have been elevated, soothed, softened into devotion, as some psalm-tune of more than ordinary sweetness was being sung amid the deepening shadows of a sabbath evening. We have been now transported by the voice of one beloved singing to us alone; and now by the many mingling notes and harmonies of a great concert of performers. And we felt these pleasures to be intellectual in their nature. They touched all that was high, and all that was pure, and all that was spiritual, and all that was immortal, in our natures. Such pleasures we felt were simple and cheap; they were at once exquisite and economical. Such pleasures, too, were pure and holy; they stung us not as we passed; and we could look their memory in the face on the next day. Yes, music has in it wondrous, mysterious, we had almost said divine powers. It can not indeed, as was fabled of old, subdue the minds of beasts by the

power of its melody, nor make stones to move and leap at its bidding ; but it can work wonders far superior in moral grandeur. Music can soothe sorrows which nothing else can assuage ; it can open fountains of tears which had been fast locked up in the frost of misery, and thereby relieve the burdened heart. How often has a tune dispelled the spirit of anger ! How does music bless and cheer the blind, whose ears, in fulfilment of the fine compensations of the universe, are the more exquisitely open and alive in proportion as their eyes are shut to all the beauties of the external world ! We know that when Milton lost his eyes in the service of his country, he was wont to refresh himself by music ; and the great structure of the "Paradise Lost" rose, like the ancient temple, to the sound of the organ. See how those sightless eyeballs of his, which had rolled in vain to find the day, seem to dilate and kindle, as the solemn instrument pours out its soothing and inspiring strains ; and the old man, though "fallen on evil days and evil tongues, with darkness and with dangers encompassed round," is happier in his little room than Clarendon on the woolsack, or Charles on the throne ! How does music awaken the spell of patriotic emotion ! See how tears stream down the rugged cheeks of Caledonia's emigrants leaving their native land, while the bagpipe is playing, "We return, we return no more." All have heard of the effects produced on the Swiss soldiery when they hear, in a strange country, the "Ranz des Vaches," or cow-song, which they had been wont to hear from the milkmaids of their own romantic land. They weep, they tremble, nay, have been known to throw down their arms, and refuse to fight, under a sudden fit of home-sickness. But if music has sometimes paralyzed, it has more frequently nerved the soldier. Battles are won and lost to the sound of music ; and the hardy veteran feels uplifted by the breath of music above the fear of death itself. We mention this, not in sympathy with the foul art of war, but from sympathy with the fine art of music ; for music has nobler scenes of triumph than the field of blood. It has soothed the soul of the dying saint, whose spirit has burst its prison-tenement in song—song to be

renewed straightway in sweeter and holier strains, under the altar, or before the throne. It has made the martyr forgetful of his fiery pangs ; and, singing at the stake, or on the scaffold, his soul has soared away, "the nearest road to the celestial gate." It is now generally supposed that our blessed Lord chanted aloud the whole of the twenty-second psalm upon the cross, and thereby at once proved that he was the victim whose agonies had been there so minutely prefigured and described, and soothed his spirit under its burden of unutterable anguish. Or if we would see music in still another noble field of its triumphs, follow it to the receptacle for the insane ; see there the poor maniac lady leaning over her piano ; and as her fingers pass across the ivory keys, which she has touched in former and happier days, old and soothing recollections stream in upon her mind—her eyes roll less wildly, gentle tears appear within them, nay, smiles begin to draw upon cheeks where they had long been absent, and where, but for the power of music, they would have reappeared no more. Music, indeed, from the powers it exerts, and the pleasures it gives, of all arts suggests, perhaps, most the idea of the Infinite—of some higher and holier state of being—and awakens strange sensations, which we may recognise in some more exalted stage of our existence.

Then there are the intellectual, moral, and spiritual advantages of music. Music not only supplies pleasures of a high order ; but, as a science—a science which, if taught properly, must be taught in a scientific method—it tends to open the mind, to cultivate the intellect, to expand the views. By connecting sound with beautiful words, it tends to improve the literary taste, to create a love for poetry, and, in general, a passion for 'all the fine arts. Its pursuits generate a fine enthusiasm. A man who throws his soul into the pursuit, loses himself in a delightful dream ; his mind rises above the grovelling cares of earth, into a rarer, purer, more intellectual atmosphere, from which, if he must and does descend, he descends a wiser and a better man. The moral advantages of the science of music are undeniable. Whatever tends to enlighten

the mind, to soften the heart, to supply a constant source of innocent and intellectual enjoyment, to withdraw the soul from the gross gratifications of the senses, must tend to improve the morals. It will generally be found, that those who possess a taste for music are milder, and, on the whole, better men than those who have none; and those artisans will not be found the worst of the class, who spend their evenings in the midst of their own families, practising, now and then, on some musical instrument, or tuning their own voices to secular or to sacred song.

We have already traced the connexion which has subsisted from very early times between religion and music. Scarce had music sung her first song, or uttered her first lisping accents, than that song arose, as by a fine instinct, to heaven, and those accents began to speak in wonder and praise of the great Creator of all; and music has since, of all secondary causes of the continuance of religion in the midst of a hostile world, been one of the principal. It has promoted private, family, and congregational piety. A private Christian versed in music can fan the flame of his devotion by singing, even in the solitary chamber; or, as the pilgrims of old were wont to lighten their long and lonely way, by spiritual songs. Thus Henry Martyn, as he crossed the great deep, on his way to receive the missionary's crown—and seldom has there been a nobler aspirant to the honor—when a dark shadow, from the very greatness of the enterprise, fell sometimes upon his spirit, was wont to solace himself, to strengthen his faith, to renew his flagging hope, by singing all alone in his berth, or on the evening deck, as the sun was setting in the direction of his beloved native land, which he was leaving for ever, such hymns as that beginning with the words, "O'er the gloomy hills of darkness;" and his fine spirit became itself again. How advantageous music is to family devotion, we need not prove; nor need we dwell on the sweet solemnity of family worship, except to notice how large a share of the beauty of the service arises from its musical part. Without the "voice of psalms, the simple song of praise," it must be confessed that this religious duty is com-

paratively cold and uninviting. Let the fathers and mothers of families attend, therefore, more to the cultivation of music, as they would have sweeter services, and happier circles around their hearths, and offer up a more acceptable morning and evening sacrifice to the God of the families of all the earth! How conducive, too, is music to congregational piety! What a delightful thing is a well-sung church! How it "beats the heavenward flame"—to use the words of "The Cottar's Saturday Night!" How fine to hear a noble psalm or paraphrase set to a suitable tune, and under the voice of a commanding leader, a thousand voices sending up, like a "steam of rich, distilled perfumes," their worship to the Most High!

The art which we thus panegyryze is not, we have seen, of yesterday, neither shall to-morrow see its end; for it is an eternal art: it is destined to survive the sun and the stars. To music shall the present system dissolve, for "the trumpet shall sound."

"The trumpet, men, intoxicate with pride,
Arm at its blast for earthly wars:
To arch-angelic lips applied,
The grave shall open, quench the stars."

Yes; the grave shall to music open its jaws; the books of judgment shall to music expand their oracular pages; the new heavens and the new earth shall descend amid shoutings—"Grace, grace unto them!" again shall the morning stars sing together; the "ransomed of the Lord shall return and come to Sion with songs;" and throughout eternity shall the blessed inhabitants, standing on the sea of glass, or sitting before the throne, amid the valleys of the heavenly Canaan, or on the summits of the everlasting hills, sing the song of Moses and of the Lamb!

IMPRUDENCE.—Those who, in consequence of superior capacities and attainments, disregard the common maxims of life, ought to be reminded that nothing will supply the want of prudence, and that negligence and irregularity, long continued, will make knowledge useless, wit ridiculous, and genius contemptible.

COLONIZATION OF GREENLAND.

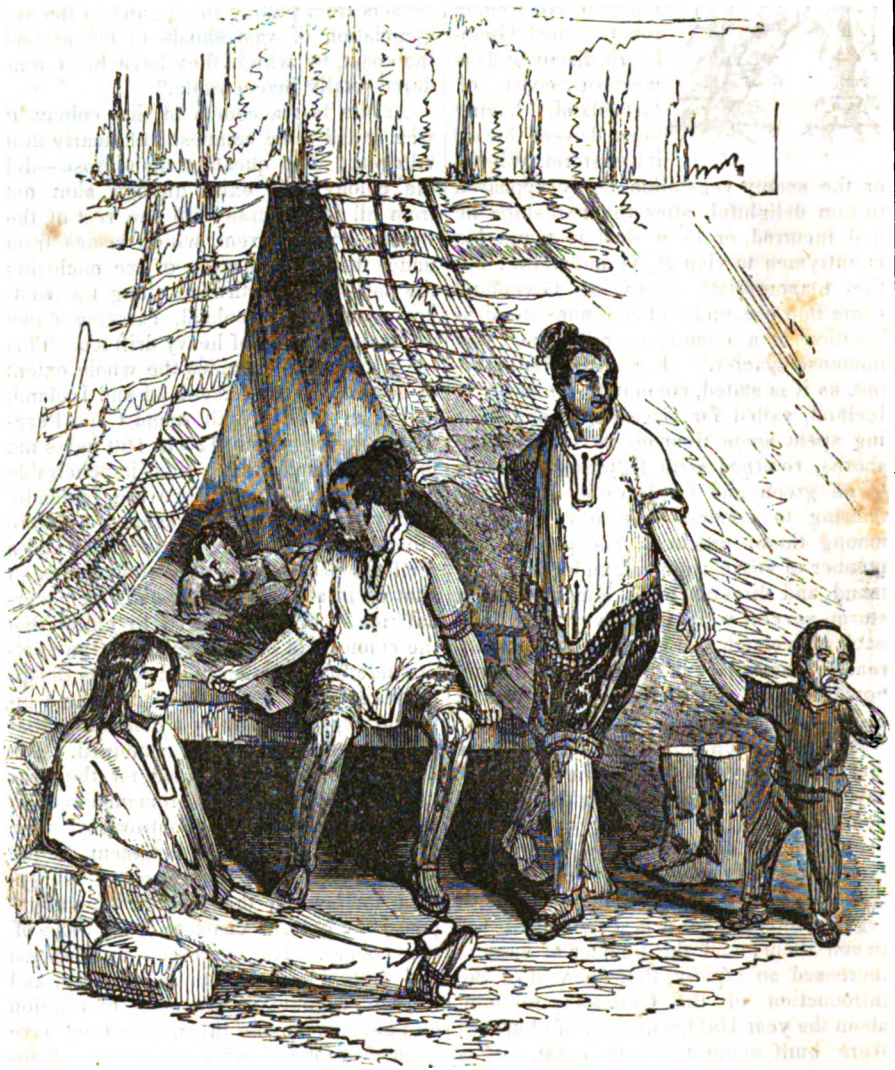


EAR the end of the tenth century, an Icelandic or Norwegian rover, named Gunnbeörn, discovered the western coast of Greenland, having been driven toward it by a storm. Whether

the scanty vegetation really appeared to him delightful, after the hardships he had incurred, or he wished to tempt his countrymen to visit it, is uncertain; but the inappropriate name of Greenland came into use, and still continues the designation of a country described as "one immense glacier." Eirik the Red, having, as it is stated, committed a murder in Iceland, sailed for Greenland; and having spent some time on its inhospitable shores, returned with flattering accounts of its green and fertile valleys, and, by offering to conduct a colony to settle among them, procured his pardon. A number of vessels set sail, under his command and direction; but encountering a storm, several were cast away, or driven back to Iceland, and only about one half reached their place of destination. Those, however, who did arrive, set to work in earnest, and the foundation of a colony was laid, which flourished for three or four hundred years. "As the distance," says Dr. Henderson, speaking on the supposition that the Icelandic colony had been planted on the *eastern* shores of Greenland, "between the two countries was little more than two hundred miles, a regular intercourse was established between them; and the number of settlers increased so rapidly, that soon after the introduction of the Christian religion, about the year 1000, a number of churches were built along the *east* coast, and a bishop was appointed to superintend the ecclesiastical affairs of the colony. He was a suffragan to the archbishop of Drontheim, in Norway. For the space of more than three hundred and fifty years, a regular intercourse was carried on between the colony and Denmark or Norway. In the year 1406, the last bishop was

sent over to Greenland. Since then, the colony has not been heard of. Its loss has been attributed to the wars which took place at that time between the Danes and Swedes, which prevented the trading vessels from putting to sea, and to the accumulation of vast shoals of ice around the coast, by which they have been rendered totally inaccessible."

At the last accounts of this colony, it was stated to be composed of nearly 200 villages. The question then arose—did the colony still exist, though shut out from all intercourse with the rest of the world? "A current, which issues from under the great masses of ice enclosing the pole, runs southward along the eastern coast of Greenland, carrying down an immense body of heavy drift ice. This ice sometimes occupies the whole extent of ocean between Greenland and Iceland, and often forms a belt round Cape Farewell, reaching from 120 to 160 miles out to sea." Had, then, this impenetrable barrier been formed since the Icelandic colony was planted in Greenland? Were villages and churches, Christianity, and a civilized people, still to be found, though shut up in a world of their own, by "eternal" ice? Some ventured to affirm that the colony had been planted on the *western* side of Greenland, and that its disappearance must have been caused by a piratical expedition, or by a contagious disease, or perhaps by both combined. But others as warmly contended for the eastern site; and there was romance enough in the idea to excite controversy. Dr. Henderson, resting his judgment on the opinion of Egede, a Norwegian clergyman, inclined to the opinion which supposed the eastern coast to be the site of the colony. He expressed an anxious and natural wish for its rediscovery, and for "an account of the state of religion and science among them, after they have been shut for so long a period from all intercourse with the rest of the world. That the descendants of the ancient colonists may still exist, although cut off from any supplies from Denmark, is rendered probable by the circumstance, that in Egede's time the barrier of ice, as far as he explored it, did not connect with the shore, but left a space of open water, in which



Interior of an Esquimaux House at Frederikshaab, on the western coast of Greenland.

the inhabitants might catch a sufficient quantity of fish for their support."

The question seems now to have been set at rest by the exertions of an enterprising Danish officer, Captain Graah. He contrived, in 1829, to make his way from the western to the eastern coast of Greenland. There were no ruins to be found, which might indicate that a civilized people once dwelt there; and, in his opinion, the low tract of country along the coast was far too limited for the existence of such a colony, containing so many villages. It seems unreasonable, too, to suppose that the access to the eastern coast should have been so widely different, a few hundred years ago, from what it is now. We must therefore come to the conclusion, that the ancient Icelandic colony was planted on the western side, along the shores of Davis's strait, where ancient ruins, especially of churches, occur, apparently putting the conclusion beyond a doubt. The cause of the extinction of the colony must be left to conjecture, though various causes might very readily occur to any one who considers the situation of the colonists at a time when intercourse was far from being regularly established.

The modern colonization of the western coast of Greenland is owing to the exertions of the Norwegian clergyman, who thought that the site of the ancient colony was on the eastern coast. Hans Egede, who had long meditated the attempt, at last being aided by subscriptions, and receiving the sanction of the authorities, planted a missionary settlement in the year 1721 on the western coast, near 64° north latitude. This he named Godthaab—Good Hope. He struggled with many difficulties for about ten years, when he was joined by the Moravians in 1733. After the missionaries had established themselves, the Danes began to frequent the coast, and gradually a number of settlements were formed, which rank now as colonies of Denmark. The Danes procure, as articles of commerce, seal-skins, fur, eider-down, train oil, whalebone, and fish.

The natives of Greenland are the Esquimaux, a widely-spread national family, with whose characteristics we have be-

come familiar, from the many expeditions that have been made in recent years to the northern parts of America. They are found in Labrador, and spread over the American coasts of the Arctic ocean, in Greenland, and on the islands between America and the pole, as far as they are inhabitable. The inhabitants are, generally speaking, of a ripe olive color (some also black), of a mean stature, with black hair, flat noses, and thick lips. They are nimble and strong, rather desperate than courageous, thievish, treacherous, and revengeful; for they would steal before the mariners' faces, and kill them after they had been well entertained by them, but are very affectionate to one another and their country. In the winter they come from the seashore to the valleys, where they have their little villages, consisting of caves, round like an oven, made close to one another at the foot of a mountain; their doors are to the south, and they draw off the water that falls from the hills by trenches. Before the doors they have a kind of porch, neatly made of the ribs of whales, and covered with sealskins. One part of the floor is higher than the rest; this they strew with moss to sleep upon. In the summer or fishing time, they live in tents covered with skins.

Our engraving represents the interior of an Esquimaux "cave" at Frederickshaab, one of the Danish settlements on the western coast of Greenland. It represents, therefore, the interior economy of one of those Esquimaux families who have come under the civilizing influences and instruction of the missionaries.

UTILITY OF BIRDS.



OME people contend that these creatures are incarnations of mischief, while others assert that they are the winged instruments of prosperity. S. declares that he would not have a gooseberry if he left

a tit alive. T. as stoutly asserts that nei-

ther gooseberries nor anything else will be left if the tits are destroyed. We have thought it advisable to give this discussion full scope, because it may be truly regarded as one of the more important of the questions incidentally connected with gardening, and moreover, one concerning which there is the most marvellous ignorance. Thousands imagine that birds live on nothing but corn and fruit, and are therefore supported at the personal expense of those who grow corn and fruit, without making any sort of return. "What," say they, "is the use of such things? We can't eat them; and there is no good in feeding a swarm of useless plunderers." And therefore, because of this wise conclusion, the order is given to shoot, trap, and poison, without mercy. Let us hope, however, that the arguments in favor of birds will remove this error, and that the question between man and birds will have reduced itself to whether the balance of good is in favor of the latter or against them.

It would be idle to assert that birds consume nothing which, but for them, we might consume ourselves. They feed in part at our expense. They destroy the insects that infest our gardens, when they can find any; and when the insects are gone, they search for other food. The first is their labor, the second their wages. And is not the workman worthy of his hire? The man who grudges a bird a little seed or fruit, might as well begrudge his weekly pay to the laborer. There is no doubt that a garden would be less expensive if all the work in it were done for nothing. If a master would pocket his servant's wages, he would have more to spend upon himself. But this sort of arrangement is not exactly consistent with the design of Providence; and we are sure that it would not meet with the approbation of either S. or T. We repeat it, then, let us look at birds as skilful workmen, and the fruit or seed which they eat as the coin in which they are paid their wages. Not that birds are an un-mixed good. Is man himself? Is anything? There are situations, doubtless, where birds are an absolute nuisance. Imagine, for instance, a garden surrounded by a wood which swarms with blackbirds.

Does any one suppose it possible to gather a ripe cherry in such a place? If he does, he is greatly mistaken. He would find the blackbird a much more dexterous gatherer than himself, and one who would relieve him from all trouble with his cherry crop. In such a case the birds must be trapped, or the crop abandoned. There would be no alternative.

But such instances are special, and form the exception, not the rule. Every day's experience tells us that birds are among the most efficient instruments of Providence for destroying the vermin that would otherwise overrun us. And people may rely upon it, that they can not more effectually encourage the ravages of those insidious foes, than by waging war upon the creatures which naturally feed upon them.

WIESBADEN.



WIESBADEN, or Wisbaden, is one of the most frequented watering places in the inland part of Germany. The central part of the building is the ball-room. The left wing is entirely occupied by gambling-tables, of which that appropriated to roulette is the favorite; and so great are the profits derived, that the lessees pay 30,000 florins annually to the Duke of Nassau, for the privilege of keeping the bank. The right wing is a sort of café, or dining-room, in which all kinds of refreshments are to be obtained; and it is never used for any other purpose. Although the exterior of the building is exceedingly plain and simple, the interiors of the wings are neat and convenient, and the ball-room is handsome, and even splendid. The floor is inlaid with various woods; a row of marble columns, of the Corinthian order, runs up each side of the room, and supports a light and spacious gallery; a considerable number of marble busts and statues are ranged beneath this double colonnade; the roof is vaulted, and though rather



Public Rooms at Wiesbaden.

sombre in color, is tastefully decorated, and the whole apartment is of large dimensions.

These three rooms, and the park which is attached to them, serve as the usual place of assembly for the numerous visitors during the season; and when it is recollected that many thousands annually congregate from all parts of Europe to this little town, it will be evident that some such point of reunion is required. The famous boiling springs of mineral water, and the baths which they supply, are in the town itself, at some little distance from the public rooms; but as not more than one person in fifty comes to Wiesbaden for any other purposes than those of amusement or intrigue, that circumstance is of but little consequence. It is, besides, the fashion for those invalids who bathe or drink the waters, to visit the spring very early in the morning, seldom later than half-past seven or eight, for the Germans keep much earlier hours than they do in England, and all strangers are obliged in some measure to conform to their habits; so that the means to be taken for the restoration of their health do not interfere with the amusements of the day.

Wiesbaden is full of large and handsome hotels, to nearly every one of which is attached a *table d'hôte*, or ordinary, where strangers dine; for at Wiesbaden it is not the custom to take dinner in private.

Wiesbaden is situated in a hollow, surrounded on all sides by distant hills, and in that respect bears a great resemblance to Cheltenham, England. Though not very far distant from the Rhine, the rising ground between the town and the river is sufficient in height and extent to protect it from the damps which rise from that mighty stream in the evenings of summer and autumn; and its low position, together with the constant though inconsiderable quantity of heat which is given out by the boiling springs, tend in some degree to soften the severity of a German winter.

Wiesbaden, from its late increase in population and in buildings, and from the sum of money annually spent there by its crowds of idle visitors, has now become the most important town in the principality

of Nassau. The residence of the reigning duke (*Hersog*) is at Biberich, a small village on the eastern bank of the Rhine; and the sovereign is also the proprietor of a great part of his own dominions. This little realm is about forty-eight miles in length and twenty-eight in breadth; and though it is, for the most part, woody and mountainous, yet it is not without fine arable and meadow land. The duke derives great revenues from the numerous favorite watering-places which are scattered about his principality: the sale of the famous Selters waters alone produces great profit. Beside his palace at Biberich, he has a handsome and convenient hunting-palace called the Platz, which is situated on the summit of a wooded hill about three miles out of Wiesbaden. From the top of the house there is a very fine and extensive view, commanding a long reach of the Rhine; and the towns of Mayence, Biberich, Darmstadt, Wiesbaden, and Frankfort, are included within its horizon.

COMMERCE.

IN the extended sense of the term, commerce includes within its range the whole trade and intercourse of nations with each other, and explains how the mutual wants of mankind occasion the exchange of the productions of one country for those of another, its influence on the character of nations, and to what extent it has aided in the refinement of a people by the introduction of the arts of civilized life. The history of commerce in all its ramifications is important to every man who desires to become an intelligent and accomplished merchant.

In view of its great importance, the regulations of commerce constitute prominent articles in all treaties between nations, whether professedly commercial or otherwise, and they are also among the principal subjects of legislation in all civilized states and kingdoms. Commerce is one of the great sources of public revenue, and one of the chief causes of the wealth of nations and of individuals. The mer-

chants of ancient Tyre and Sidon, two famous cities of Phenicia, from their wealth acquired in the pursuits of commerce, were called "merchant princes," and the Florentine family of Medici, acquired as high distinction for their mercantile enterprise as their political eminence, and while exercising the highest offices of the republic, they did not think it beneath them to attend to the affairs of the counting-room. There is no condition of life more honorable than that of the intelligent, honest, industrious, and enterprising merchant; no occupation in which a man can make himself more useful.

Commerce is so intimately connected with agriculture, manufactures, and the mechanic arts, that they may be said to move hand in hand. Without proper attention to the pursuits of agriculture, commerce would be extremely limited in its operations; and without commerce, agriculture would lose its chief support. Without commerce, manufactures would languish; with it, they find their way into every corner of the known world. Freighted with the productions of our prolific soil, and of our manufactories, the sails of American vessels whiten every sea, and are spread to every breeze.

MAY.



ON the first day of this month, the Romans held a feast in honor of Maia, the mother of Mercury; and by some it is supposed that this was the origin of the name May. By the Saxons it was called *Tri-milki*; the pasturage in this month being so abundant as to enable them to milk their cows *tri*, or three times in the day.

May has ever been the favorite month of the year in poetical description; but the praises so lavishly bestowed upon it, took their rise from climates more southern than ours. In such, it really unites all the soft beauties of spring with the ra-

diance of summer, and has warmth enough to cheer and invigorate, without overpowering. With us, especially since we have reckoned by the new style, great part of the month is yet too chill for a perfect enjoyment of the charms of nature; and frequent injury is done to the flowers and young fruits during its course, by blights and blasting winds. May-day, though still observed as a rural festival, has often little pleasure to bestow but that arising from the name. In a very elegant poem, entitled "The Tears of Old Mayday," this newer rival is thus described:—

Nor wonder, man, that Nature's bashful face
And opening charms her rude embraces fear;
Is she not sprung of April's wayward race,
The sickly daughter of the unripened year?

With showers and sunshine in her fickle eyes;
With hollow smiles, proclaiming treacherous peace;
With blushes harboring in their thin disguise,
The blast that riots on the spring's increase.

The month, however, on the whole, is even in this country sufficiently profuse of beauties. The earth is covered with the freshest green of the grass and young corn, and adorned with numerous flowers opening on every side. The trees put on all their verdure; the laburnum horse-chestnut, and the alder, blossom in this month. The hedges are rich in fragrance from the snowy flowers of the hawthorn; and the orchards display their highest beauty in the delicate blush of the apple-blossoms. All this scene of beauty and fertility is however sometimes dreadfully ravaged by the blights which peculiarly occur in this month. The mischief seems to be done chiefly by innumerable swarms of very small insects, which are brought by the northeast winds.

FIRESIDE MUSINGS.

It is a moment of peril to the young child, when first he breaks from the guiding hand of his watchful mother, and stands unprotected and alone, depending on his own strength and trusting in his own judgment. One short step, inadvertently taken, may, by laying him prone on the earth, at once destroy the charm of his new position, and shatter his self-confidence,

that moving-spirit of all great enterprise; while another taken in deliberation and foresight, may give him proper reliance in his own powers, and place him beyond the reach of harm. So it is with the immortal mind; that moment must arrive when it bursts asunder the bond that has bound it, breaks from the controlling hand of parent or guardian, and in the full consciousness of its own intellectual powers, stands forth, alone, to think, to will, and to reason for itself. It is a fearful moment for the mind, when sophistical, shallow theories, narrow and false doctrines, appear before it, in their enticing, gorgeous garbs, and when vice itself lies hid beneath the bright pageant.

It is a fearful struggle to decide which is the right—to feel that it is not enough to have been reared in a faith, to have had the same doctrines instilled, drop by drop, into the infant—to have been given precepts and blindly to have followed them—to have received the judgments, the principles, the very sentiments of others, and to have embraced them in the cold ignorance of an unthinking mind. It is sad, indeed, to feel that the dearest ties of nature are not sufficient, *alone*, to strengthen or retain a spark of the affections born within us; but it is a pleasing reflection that the mind can no longer be led, that it has arrived at that point when it *must* assert its own power, and must influence others with its own dignity. God of heaven help the weak in that hour, and the strong too, for at heart we are frail, and need his aid sadly! But when the mind, after deep, serious thought, long study, and earnest prayer, has arrived at its own conclusion, and adopted *one* consistent course, to the exclusion of all others—in the path in which it has been reared and tended is abundance for another—if the sweet memory even of its infancy is cast aside at once and for ever, have we a right to censure? Is it not, oh! far nobler to soar above the unworthy trammels of habit, and in the broad, open sunshine of our own intellects, mark, decide, and act, for ourselves? Where is the exercise of firm resolution, Christian fortitude, and lofty impulse, if we are *bound* to tread in one path, in the calmness of indifference, and the lethargy of

ignorance. Oh! we are not endowed thus richly with exalted faculties, if it were intended by Heaven they should be dormant within us. No! let us investigate deeply and reflect seriously; let us concentrate the noble powers of our cultivated minds upon the greatest, the sublimest subject that ever filled the human mind. And in the meantime, let us not condemn unmercifully, but respect, esteem, and emulate, those who have had the moral courage, high spirit, and independence, to swerve from the belief in which they have perhaps, blindly lived, and before the whole world to avow the beautiful truths that have been revealed to them in their deep and prayerful research.

THE BISON.



HIS remarkable species of ox is peculiar to North America. Until of late years, it was very generally considered that the domestic ox, the wild bull (*urus*) of Europe

and Asia, and the American bison, were only varieties of the same species, or, in other words, that the domestic ox was the *urus* altered by civilization, and that the bison was the *urus* altered by climate. This was the opinion of Buffon, Pallas, and other distinguished naturalists. The identity of the *urus* and the bison being assumed, it became a question of somewhat difficult solution how these animals migrated from the old to the new world. Many ingenious theories were framed to meet the circumstances, but the necessity for these speculations has been superseded by the discovery made by Cuvier, that the bison of America is really a species distinct from the *urus*; and he has indicated the very important differences by which the distinction is established.

We may consider the bison as characterized by fifteen pair of ribs (the wild bull has only fourteen) and by the immense disproportion between its fore and hind quarters. The latter distinction is partly occasioned by the great hump or



The American Bison.

projection over its shoulders. This hump is oblong, diminishing in height as it extends backward, and giving a considerable obliquity to the outline of the back. The hair over the head, neck, and fore part of the body, is long and shaggy, forming a beard beneath the lower jaw, and descending below the knee in a tuft. The hair on the summit of the head rises in a dense mass nearly to the tip of the horns, and directly on the front is curled and strongly matted. The ponderous head, rendered terrific by its thick, shaggy hair, and streaming beard, is supported upon a massive neck and shoulders, the apparent strength of which is more imposing from the augmentation produced by the hump, and the long fall of hair by which the anterior parts of the body are covered. This woolly hair is remarkable, not less for its fineness than its length. The difference between the winter and the summer coat of the bison consists rather in the length than in the other qualities of the hair. In summer, from the shoulders backward, the surface is covered with very short, fine hair, smooth and soft as velvet. Except the long hair on the fore parts, which is to a certain extent of a rust color or yellowish tinge, the color is a uniform dun. Varieties of color are so rare among the species, that the hunters and Indians always regard any apparent difference with great surprise. The fleece or hair of a full-grown bison, when separated from the skin, is usually found to weigh about eight pounds, according to Charlevoix. The horns are shorter than in any other species, nearly straight, sharp-pointed, exceedingly strong, and planted widely asunder at the base, as in the common bull. The tail is almost a foot long, and terminates in a tuft, which is black in the males and red in the females. The eyes are large and fierce; the limbs are of great strength; and the appearance of the animal is altogether exceedingly grim, savage, and formidable. According to Hearne, the size of the bison is, on the average, less than that of the urus, but exceeds that of every other species of the ox. It has been known to weigh 1,600 and even 2,400 lbs.; and the strongest men are said to be unable, singly, to lift one of the skins from the ground. The

female is much smaller than the male; she has not so much of the long hair in front, and her horns are not so large, nor so much covered by the hair. The males and females associate from the end of July to the beginning of September; after which the females separate from the males, and remain in distinct herds. They calve in April. The calves seldom leave the mother until they are a year old, and sometimes the females are seen followed by the young of three seasons.

The bisons generally seek their food in the morning and evening, and retire during the heat of the day to marshy places. They rarely resort to the woods, preferring the open prairies where the herbage is long and thick. They also associate in vast troops, led by the fiercest and most powerful of the bulls. In both these respects their habits differ from those of the urus, which leads a solitary life in the deepest gloom of the forest. The herds of bisons are frequently of astonishing density and extent. While feeding, they are often scattered over a vast surface; but when they move forward in mass, they form a dense, impenetrable column, which once fairly in motion is scarcely to be turned. They swim large rivers nearly in the same order in which they traverse the plains; and when flying from pursuit, it is in vain for those in front to make a sudden halt, as the rearward throng dash madly forward, and force their leaders on. The Indians sometimes profit by this habit. They lure a herd to the vicinity of a precipice, and setting the whole in rapid motion, they terrify them by shouts and other artifices to rush on to their inevitable destruction. The chase of the bisons, indeed, constitutes a favorite diversion of the Indians, numerous tribes of whom may be said to be almost entirely dependent on these animals for all their necessities of life. They are killed either by shooting them, or by gradually driving them into a small space, by setting fire to the grass around the place where the herd is feeding. They are much terrified by fire, and crowd together to avoid it; and they are then killed by bands of Indians, without any personal hazard. It is said that on such occasions, 1,500 or 2,000 have sometimes been killed at a time.

The flesh of the bison is coarser grained than that of the domestic ox, but is considered by hunters and travellers as superior in tenderness and flavor. The hump is highly celebrated for its richness and delicacy, and it is said, when properly cooked, to resemble marrow.

The skins of the bisons are of a loose and spongy texture; but when dressed in the Indian manner, with the hair on, they make admirable defences against the cold, and may be used for blankets. They are called buffalo robes; the term buffalo being generally, but inaccurately, applied to the bison. The wool of the bison has been manufactured into hats, and has also been employed in making coarse cloth of a very strong and durable texture.

GEOLOGY,

ITS OBJECTS AND ADVANTAGES.



OW this earth has been created, and its mountains and valleys received the forms they now possess, is an inquiry which seems natural to man.

He can not be indifferent to the structure of that globe which was the birthplace of his race, the theatre of all those mighty deeds which adorn or disgrace the annals of humanity. With its history his own is closely connected, in all its most important points. Profane history soon ceases to follow back the chain of human affairs, and the origin of nations is lost in obscurity. The Scriptures record rather the moral and religious history of the species, than the physical or political fortunes of the various tribes and nations into which it was divided. They no doubt contain the earliest and most authentic accounts of the creation and first actions of men; but these, though fully sufficient for their purpose, have not satisfied human curiosity—ever desirous to know more than has been revealed. Hence, at all times, in-

quiries into the origin of the world and the creation of the human race have engaged the attention of both the learned and the unlearned.

Nor are such inquiries, when pursued in a right spirit, improper. The word and the works of God never can contradict each other, and the more fully each is searched out and understood, the more clearly will they confirm the great truth, that both have one and the same all-wise Author. Geologists have often been accused of infidelity, and of attempts to destroy the authority of the Bible; but we believe that this accusation is false, and that no foundation for it will be found in the writings of any of the great men who have thoroughly investigated its principles. Disappointed theorists who could not refute the arguments of their opponents, have sometimes accused them of opposing scripture; but such groundless affirmations deserve as little regard as those of the men who condemned Galileo for affirming that the earth moved, while the sun stood still. Astronomy has now proceeded far beyond what even the imagination of the Italian philosopher could have conceived; yet the truth of the Bible is not affected; and, in like manner, we may rest assured, that when geology has expanded to its full dimensions, the authority of revelation will remain wholly unimpeached.

Geology is one of the most recent of the sciences. A century ago it could hardly be said to exist, and the theories of Leibnitz, Burnet, and Buffon, were equally fanciful and unsupported by facts, as those of the ancient Greeks. Of late, however, it has entered on a new and more scientific path. It no longer inquires how "in the beginning God created the heavens and the earth;" but assuming that as a fact beyond all doubt or appeal, confines its investigations to the present structure of the globe, and the traces of revolutions which it has undergone. It has now ceased to be a romantic theory, built up on the fancy of speculators, and has taken its place among those inductive sciences to which the genius of Bacon has given the law and rule of investigation. Men must now observe and inquire, before they are allowed to speculate. Be-

fore forming a theory of the earth, they are expected to know the facts which the earth's crust exhibits, and which their theory must explain. No one would venture now to write quarto volumes on rocks, without having studied them in the fields, and even to boast of this as a qualification for his task. Geologists must now come into closer contact with the works of the great Creator, and thus learn more fully their own weakness and ignorance; and they have thus become more deeply impressed with that spirit of reverent humility which becomes the true philosopher.

The advantages to be derived from the study of any science can seldom be understood till its principles are known, and should follow, not precede, the exposition of these. In some respects this is true of geology; but many of its applications are almost self-evident. In the mines, geology had, in a great measure, its birth, and many of its most important facts have been observed there. The theory of veins and stratification, with the peculiar distribution of the valuable ores and minerals, were at least partially known to practical men before they found a place in the systems of geologists. But in these they appear in a new form, and with new light. They are no longer mere facts, standing solitary and alone, for which no reason can be assigned and no cause given. They now form part of a well-connected system, and the miner is taught not only when they should occur, but also where he may expect exceptions to the general rule. The names of many rocks are derived from the local terms used in particular mining districts; but science has given precision to these terms, and, from words hardly understood at a few miles' distance, has rendered them intelligible over the whole civilized world. The facts observed in distant places and countries can thus be described in uniform language, and compared with each other, so that what in them is merely local, may be separated from what is universal. Hence the system of Werner, with all its errors, was of great use in the progress of the science, by enabling inquirers in different countries to understand each other, which they had never previously been able to do.

But geology gives to the miner means of distinguishing rocks which he did not formerly possess, and thus of knowing where minerals may or may not be expected to occur. This is one of its most evident advantages, and one in which the whole community is more or less interested. Ignorant miners were often guided in their search for ores or coal by certain characters which were of little value, except in a few localities, and induced men to spend much money seeking for mineral treasures in places where a geologist could have said at once that they were not to be found. In many places in England and Scotland, mines may be seen, driven for hundreds of yards through the hardest rocks, in the expectation of discovering coal, though men of science know that it is never found in such circumstances, and though the whole succession of rocks is laid open by some neighboring river or ravine. Mr. Murchison, when examining the geological structure of Wales, met with repeated instances of this kind, and the poor farmers, after ruining themselves in the vain research, often complained to him of their landlords, who would not continue the profitless pursuit. "Ah! if our squires were only men of spirit, we should have as fine coal as any in the world," was the frequent remark of such speculators, wholly untaught by their own painful experience. Yet a few popular lessons in geology would have dissipated the vain delusion, and taught these men that they were spending their money and labor to no purpose. Even in the south of Scotland, where the mass of the people are well educated, many similar attempts have been made on rocks of the same geological formation, and of course, with equal want of success. It is a singular fact, that these explorers are usually misled by a variety of black slate, composed almost entirely of flint, and hence as hard as iron, and wholly incombustible. It is, in truth, well described by a sanguine excavator of this class, who said to his minister, "It is as black as a coal, as hard as a coal, and as heavy as a coal; in short, it is coal altogether—except that it will not burn."

In these instances, geology would have told these persons that coal worth work-

ing never occurred in such rocks, and thus saved them their dear-bought experience. But it not only tells where coal is not, but also where it is to be found. It makes known the order and succession of the various rocky beds that make up the crust of the earth, and thus renders its interior almost transparent to the eye of science. The practical geologist examines the surface of a country, and finds it composed of a species of rock which he knows lies higher in the series than coal. From its fossil remains, the shells or plants it contains, he knows its place in the earth's crust, and hence the probability of coal lying below it. Such scientific divining has, in many instances, proved successful, and many undertakings which merely practical men ridiculed, have produced great wealth to the bold theorist who dared to despise their warnings. Mr. Murchison, in the work already alluded to, mentions many instances of valuable coal-pits sunk through beds of red sandstone, in places where, a few years ago, no one suspected this mineral to exist. In the north of England many similar cases occur. There are examples, too, of valuable minerals, not concealed in the bowels of the earth, but lying open on its surface, having been wholly neglected, till some competent geologist was led to the spot by accident. In Unst, the most northern of the British isles, great quantities of a particular rock were strewed over the ground, and so little regarded as to be used for constructing walls or fences. Dr. Hibbert found that this was the chromate of iron, from which chrome yellow, so much used in manufactures, is prepared, and these neglected stones immediately became objects of commerce, and a source of large income to the proprietors.

These few instances show the advantages which may result from the study of geology. The interests of private individuals are not only promoted by it, but also those of the whole nation. Many instances might be produced of the benefits it has conferred both on private individuals and the community, and other applications of its principles to various professions and pursuits might be noticed.

But few can directly participate in these advantages, compared to the number of

those to whom it may prove a copious source of intellectual gratification and moral improvement. Though the study of geology may be begun in books and class-rooms, it must be pursued in the open fields. The descriptions and theories of our instructors must be compared with the realities and facts of nature. It is thus only that progress can be made in the science, and its true advantages realized. We must cease to listen to the voice of men, that we may hear the Creator speaking to us in his works. Nor is it to every part of these works alike that the attention of the geologist is turned. The verdant meadow or the fertile plains, covered with rich and luxuriant vegetation, do not escape his notice, and in his eyes have a meaning and a worth beyond that observable to the common crowd of men. Their beauty and fertility is as open to him as to the painter, poet, or agriculturist; but, beside this, he sees in them parts of a great whole, and can trace back their history, through many revolutions, to the time when they were, perhaps, the bottom of a lake whose waters have disappeared, the estuary of a river which has ceased to flow, or a portion of the channels of the ocean, above which they are now far elevated. But the pursuits of the geologist lead him to prefer other scenes, of a wilder, more rugged, and less generally attractive nature. The rocky seacoast, where the land and waters carry on their never-ending contests for the supremacy, is to him full of instruction. In the lofty cliffs, sections are laid open he would in vain look for elsewhere, and the mouldering pinnacles of rock speak to him of events older than the pyramids, and chronicled in characters more enduring and intelligible than their sculptured hieroglyphics. The narrow ravine, where the foaming river can scarce force its way amid the projecting rocks, has many lessons to impart to him. In its rude walls he sees the various strata concealed beneath the deep soil and abundant crops of the neighboring plains; while the form and depth of the channel tell of the power of aqueous erosion, and form a kind of natural chronometer, by which the past duration of our present continents may be estimated.

But the favorite resort of the geologist is the lofty mountains and their lone valleys. In their towering rocks and majestic precipices he sees clear traces of those tremendous forces which have agitated and convulsed the globe. In searching out these, he is led into wild scenes of the most romantic beauty, which have been for ages concealed in the remote wilderness. He thus sees and enjoys much which is hid from others, who have not this motive to explore these lonely solitudes. Here also his science gives meaning to natural appearances, which to other men seem unintelligible and repulsive. In the rude blocks scattered over a mountain-side, he finds a confirmation or confutation of a theory of the universe, or an explanation of facts observed in some remote quarter of the globe. No one can look, without emotion, on the granite pinnacles of Arran, rising from the broad estuary of the Clyde, but they have assuredly more than a twofold interest to those who see in that small island a model of the whole earth, and a test of all the theories that have been proposed, to account for its phenomena.

Geology thus makes us acquainted with some of the most interesting parts of that great globe we inhabit, and enables us to find pleasure and instruction even in its rudest and most barren districts. The bleakest moor loses its loneliness, and the sandy down is not so uniform or devoid of meaning as to disgust us. In this way, travelling is rendered doubly instructive and amusing, and is changed from a mere mean of spending time or gratifying an idle and ignorant curiosity, into a source of high moral and intellectual improvement. It is indeed remarkable, when we look to the number of persons who in the present day wander over the length and breadth of our land, how few take any care to derive from their journeys the full amount of amusement and information they are fitted to convey. It is not enough to visit remarkable places, to stand on the ground consecrated to virtue and patriotism, unless we participate in these feelings and have our good resolutions strengthened by the emotions they inspire. So, also, in visiting beautiful and sublime scenery, it is not sufficient to yield up our

minds in listless indolence to the pleasurable emotions they excite. Such scenes are calculated to inspire higher sentiments, and we forfeit half their use and value when our minds are not prepared to receive these. Nothing stands alone in nature; no part of the vast universe exists solely for itself. Every portion of it is connected with those around, and bears to them innumerable relations. The true import of the mountains and hills can only be understood when viewed in connexion with plains and valleys; and the significance of the sandy deserts of the Sahara, may be read in the genial climate of our own continent. But it is geology and its connected sciences, which hold the key to this branch of wisdom, and can alone open their treasures to men. It not only unfolds the present purpose and uses of various portions of creation, but exhibits their connexion with what precedes and follows them. It thus lays open to us wider and more extended views of the divine Providence, and proves that even the physical welfare and comfort of man had been foreseen and attended to ages before he was called into being. For to what else than the wise benevolence of the Creator can we ascribe those stores of coal, and iron, and limestone, accumulated in such inexhaustible abundance, and brought into that contact with one another which renders them available to the uses of men? Had each existed in equal or even greater profusion, but widely separated from the other, had the iron ore been found without the coal and limestone necessary to convert it into the precious metal, how far inferior would have been the advantages derived from them! What a blight would it cast on the industry and commerce of the world.

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WISDOM OF FAITH.—Does not every architect complain of the injustice of criticising a building before it is half finished? Yet who can tell what volume of the creation we are in at present, or what point the structure of our moral fabric has attained? While we are all in a vessel that is sailing under sealed orders, we shall do that which is best for us, if we confide implicitly in our government and captain.

NEW ZEALAND.



EW Zealand, filling a large space in the southern Pacific, extending from 34° to 47° south latitude, and from 167° to 179° east longitude, was discovered by Tasman, a Dutch navigator in 1642. The vast southern Pacific was then an almost unexplored region, and though nearly two centuries had elapsed since European navigators discovered the passage to India by the cape of Good Hope, the mine of enterprise which was then opened still continued to attract their chief attention, and to satisfy their maritime ardor. The reputed existence of a fifth continent, placed in the southern hemisphere, and vague rumors of its supposed rich productions, inflamed the imagination of geographers, and proved a wholesome stimulus to the progress of discovery. Tasman was despatched by Anthony Van Diemen, governor of the Dutch East Indies, and sailed on the 14th of August, 1642, from the Port of Batavia, in company with another vessel under his command. He first discovered the island now known as Van Diemen's land; and pursuing his voyage toward the east, again saw land on the 13th of September, and following the line of coast anchored next day within a large bay, here for the first time he had an opportunity of seeing the natives, who came out in two canoes, and hailed the strangers in a strong rough voice, but they did not approach very near to the ship. On the following day, a canoe with thirteen men came within a stone's throw, but no temptations could induce them to come on board the ship. Tasman describes them as of the common statura and strong-boned; their complexion between brown and yellow, and their black hair tied up in the Javanese fashion, on the crown of the head, with the addition of a large feather stuck therein. Seven other canoes in the meantime put off from the shore, and Tasman, doubtful of their intentions, hoisted out one of his boats, which being manned by a quartermaster and six seamen, was

on its way to the other ship to put her commander on his guard, when the canoes ran violently in upon the boat and nearly upset it, at the same time making a desperate attack upon the boat's crew. Three of the seamen were killed and one mortally wounded. The savages then hastily retreated, carrying with them one of the dead bodies. Tasman immediately weighed anchor, and gave the place the name of the Bay of Murderers. Thus inauspiciously did the first interview of the New-Zealanders with Europeans terminate. Tasman had not been able to bring his guns to bear upon the retreating islanders, and the savages could not as yet appreciate the hostile power which they had aroused. When the ship had got under sail, twenty-two canoes followed her, and advancing within range of the guns, were fired upon, and one man being killed, and the shot striking the canoes, they turned toward the shore. The man who was killed bore a white flag in his hand. Tasman's course precluded him from ascertaining that what he took for a large bay was the strait separating the northern from the southern island, which unitedly are known under the name of New Zealand. He therefore naturally looked upon the other island as a continuation of the same land, and that in fact he was upon the shores of the new continent, believed to exist in this part of the southern ocean. "It is," he says, "a very fine country, and we hope it is a part of the unknown south continent." One of his countrymen had made a similar mistake about a quarter of a century before, having come in sight of land which he conceived to be part of a continent, and to which he gave the name of Staten land, or State's land. Just at this time, or a few months afterward, the supposed continent was discovered to be an island of no great extent; but Tasman believed that he had also fallen in with a portion of Staten land or the southern continent. When it was ascertained that the country called Staten land was only an island, Tasman's discovery received the name of New Zealand. On the 4th of January he passed the north-western extremity of New Zealand, which he named Cape Maria Van Diemen, in honor of a lady to whom it is said he was



Canoe and Natives off Cape Wangari.

attached, the daughter of the governor under whose auspices the expedition was projected.

It was above a century after Tasman's voyage before New Zealand was again visited by Europeans; but on the 6th of October, 1769, Captain Cook, then making his first voyage of circumnavigation in the *Endeavor*, came in sight of the island.

Captain Cook approached New Zealand from the west, on his passage from the Society islands, while Tasman had reached it from the east. The general opinion on board the *Endeavor* was that they also had found the "*Terra Australis Incognita*." On the 8th Cook anchored, and soon after went on shore accompanied by Mr. (afterward Sir Joseph) Banks and Dr. Solander, and were unhappily attacked by the natives, on whom they were compelled to fire in self-defence. An attempt at friendly intercourse was made the day following, but though aided by the persuasions of a native of Otaheite on board the *Endeavor*, it proved unsuccessful. The *Endeavor* did not leave this part of the coast without an unfortunate collision with the natives, who fought in the most obstinate manner against an unequal force, the contest ending in four of the savages being killed. Two youths, one aged 19, and the other 11, were taken on board the ship, where they expected instant death, but being kindly treated, soon recovered their spirits. Being unable to obtain provisions at this place, to which Cook gave the name of Poverty bay, the anchor was weighed, and the *Endeavor*, pursuing the line of coast, came to the supposed bay in which Tasman had anchored, and which Cook found to be a strait separating the islands: in the maps it bears the name of Cook's straits.

The next epoch in the intercourse with New Zealand, arose out of the proximity of the English settlements in New South Wales, founded at the close of the last century, the distance from them being about 1,200 miles; while New Zealand is not more than two or three days' sail from Norfolk island, where a settlement was commenced in 1793. The natives of New Zealand have frequently visited Sydney, Port Jackson, and other Australia

ports. At a somewhat later period, the ships engaged in the South sea whale fishery, began to frequent New Zealand; and the government at New South Wales availed themselves of this medium to send presents of cattle, grain, and such other articles as were calculated to promote the social improvement of the natives.

A third stage in the intercourse of New Zealand with civilized nations is marked by the arrival of Christian missionaries in 1814, after they had remained several years in New South Wales. The Church missionary society commenced this work, in which other societies have engaged, and their operations during the last twenty-five years, have had some important influence on the New Zealand character. The island has also become an active scene of commercial enterprise, and as the Australian colonies increase in wealth and population, New Zealand will be brought into still closer connexion with the habits and wants of civilization.

GIGANTIC BIRDS OF FORMER TIMES.



Ta late meeting of the British association, a very interesting paper was furnished by Mr. Bonomi, on certain gigantic birds of former times. The existence of elabs

of the new red sandstone of America, marked with footsteps of huge birds is well known. As some of these animals are calculated to have been fifteen feet high, they were at first supposed to have no parallel in the present state of nature; but this was soon found not to be the case, as several specimens of the bones of a bird not less gigantic have been sent home from New Zealand, where it is spoken of by the natives as existing under the name of Moa. There have also been discovered by Captain Flinders, on the south coast of New Holland, in King George's bay, some very large nests, measuring twenty-six feet in circumference, and thirty-two

inches in height, resembling, in dimensions, some that are described by Captain Cook, as seen by him on the northeast coast of the same island, about fifteen degrees south latitude. It would appear, by some communications made to the editor of the London Athenæum, that Professor Hitchcock of Massachusetts had suggested that these colossal nests belonged to the Moa.

In connexion with these discoveries is another from an opposite quarter. "Between the years 1821 and 1823, Mr. James Burton discovered on the west coast, or Egyptian side of the Red sea, opposite the peninsula of Mount Sinai, at a place called Gebel Ezzeit, where, for a considerable distance, the margin of the sea is inaccessible from the desert, three colossal nests within the space of one mile. These nests were not in an equal state of preservation; but, from one more perfect than the others, he judged them to be about fifteen feet in height, or as he observed, the height of a camel and its rider. These nests were composed of a mass of heterogeneous materials, piled up in the form of a cone, and sufficiently well put together to insure adequate solidity. The diameter of the cone at its base was estimated as nearly equal to its height, and the apex, which terminated in a slight concavity, measured about two feet six inches, or three feet in diameter. The materials of which the great mass was composed, were sticks and weeds, fragments of wrecks, and the bones of fishes; but in one was found the thorax of a man, a silver watch made by George Prior, a London watchmaker of the last century, celebrated throughout the East, and in the nest or basin at the apex of the cone, some pieces of woollen cloth and an old shoe.

That these nests had been but recently constructed, was sufficiently evident from the shoe and watch of the shipwrecked pilgrim, whose tattered clothes and whitened bones were found at no great distance; but of what genus or species had been the architect and occupant of the structure, Mr. Burton could not, from his own observation, determine. From the accounts of the Arabs, however, it was presumed that these nests had been occupied by remarkably large birds of the stork

kind, which had deserted the coast but a short time previous to the period of Mr. Burton's visit."—"To these facts," said Mr. Bonomi, "I beg to add the following remarks:—

"Among the most ancient records of the primeval civilization of the human race that have come down to us, there is described in language the most universally intelligible, a gigantic stork, bearing, with respect to a man of ordinary dimensions, the proportions exhibited in the drawing before you, which is faithfully copied from the original document. It is a bird of white plumage, straight and large beak, long feathers in the tail; the male bird has a tuft at the back of the head, and another at the breast; its habits apparently gregarious. This very remarkable painted basso-relievo is sculptured on the wall, in the tomb of an officer of the household of Pharaoh Shufu (the Suphis of the Greeks), a monarch of the fourth dynasty, who reigned over Egypt while yet a great part of the Delta was intersected by lakes overgrown with the papyrus—while yet the smaller ramifications of the parent stream were inhabited by the crocodile and hippopotamus—while yet, as it would seem, that favored land had not been visited by calamity, nor the arts of peace disturbed by war; so the sculpture in these tombs intimate, for there is neither horse nor instrument of war in any one of these tombs. At that period of the building of the great pyramid, which, according to some writers on Egyptian matters, was in the year 2100 B. C., which, on good authority, is the 240th of the deluge, this gigantic stork was an inhabitant of the Delta, or its immediate vicinity; for, as these very interesting documents relate, it was occasionally entrapped by the peasantry of the Delta, and brought with other wild animals, as matters of curiosity, to the great landholders or farmers of the products of the Nile—of which circumstance this painted sculpture is a representation, the catching of fish and birds, which in these days occupied a large portion of the inhabitants. The birds and fish were salted. That this document gives no exaggerated account of the bird, may be presumed from the just proportion that the quadrupeds, in the same picture,

bear to the men who are leading them; and, from the absence of any representation of these birds in the less ancient monuments of Egypt, it may also be reasonably conjectured they disappeared soon after the period of the erection of these tombs.

With respect to the relation these facts bear to each other, I beg to remark, that the colossal nests of Captains Cook and Flinders, and also those of Mr. James Burton, were all on the seashore, and all of those about an equal distance from the equator. But whether the Egyptian birds, as described in those very ancient sculptures, bear any analogy to those recorded in the pages of the great stone book of nature (the new red sandstone formation), or whether they bear analogy to any of the species determined by Professor Owen from the New Zealand fossils, I am not qualified to say, nor is it indeed the object of this paper to discuss; the intention of which, being rather to bring together these facts, and to associate them with that recorded at Gezah, in order to call the attention of those who have opportunity of making further research into this interesting matter."

CATARACT AT FOSSVÖLLUM. ICELAND.



THE volcanic character of the island of Iceland, and the many convulsions which it has experienced at various periods, rending asunder the mountains, throwing obstructions in the way of the rivers, and producing rents and chasms in the valleys, explain the origin of the many waterfalls and cascades which the traveller meets with in that bleak and desolate country. In many parts, especially in the neighborhood of volcanic mountains, cataracts abound, generally presenting features of the most terrific but picturesque character. There are many worth visiting in the neighborhood of the Geysers, or hot

springs, in the western part of the island, but perhaps the most remarkable is one on the eastern coast near *Hof*. This *foss*, or waterfall, is surrounded by many lesser cataracts, which in another place would be viewed with the most lively interest, several of them falling more than 100 feet; but in the neighborhood of the more important one, which is represented in the engraving they sink into comparative insignificance.

In visiting Fossvöllum from *Hof*, the margins of several of these springs have to be traversed, and travellers find it necessary to proceed with the greatest caution. The whole track (road it can not be called, for it would be impossible for any wheeled-carriage to pass over it) by which the falls are approached from *Hof*, is dreary and mountainous, intersected by chasms at which the traveller shudders as he looks down the abyss, now winding around the side of a mountain, and then descending the abrupt declivity of a ravine, until it leads to within ear-shot of the sound of the falling waters. The troubled waters, dashing over a precipice of rugged rocks, both sides of which are lined with verdant meads—the gentle elevations which encircle the plains, the stately appearance of the farm, the extent and verdure of the *tún*, and the number of sheep, cows, and horses, that were feeding in every direction, produce altogether an effect the most lively and pleasing.

The waters roll sullenly forward along the plains until they arrive at an extended and precipitous break, where they shoot over in one sheet until within a short distance from the ground, when the waters are separated into thousands of sparkling streams and innumerable particles of spray flying about in all directions. The water then glides swiftly along the plains below, passing by the farm of *Biörnson*, which is of considerable extent. Few spectacles can be more magnificent than that which these falls present. It is worth the disagreeable journey, to behold the unbroken surface of the water shining like silver in the rays of the sun, until half way down it becomes expanded, and appears to be swallowed up in a cloud of snow, which the particles of spray closely resemble, and from which the stream below appears



Cataract at Fosvöllum, Iceland

bursting, and apparently commencing a new existence as it ripples joyously over the pebbles beneath. But it is at night, when the moon is shining in the heavens with sufficient power to define the objects around, that the "Cataract of the Plains" is to be seen with the greatest advantage, and when it excites the most lively admiration. The indistinct mountainous tract, stretching away in the distance, the huge masses of rock that lie strewn around, and the buildings of the farm, seen as they are but imperfectly, afford greater play to the imagination, which, excited by the roaring of the cataract (the only thing which night renders more near and distinct), exerts its influence on the spectator, who stands as if under the spell of an enchanter, wrapped up in the contemplation of the scene.

Fossvöllum is situated on the northeastern coast of Iceland, in 30° north latitude, and between 14° and 15° west longitude. The farm of Björnson, which although at a distance from the falls, appears to lie almost under the cataract, is conducted with much skill.

THE HUMAN BODY



WE are fearfully and wonderfully made, may be said of our bodies, of our souls, of our minds, of the connexions between soul and body, and of the whole man.

There may be far more wisdom and skill manifested to the spiritual world, in the formation of our souls, or the structure of our minds, than in our bodily frames. But this is concealed from our view. We can, indeed, see that there is something incomprehensible and overwhelming in the being and nature of our souls, and especially in the connexion between our spiritual and corporeal being. Yet the wisdom of the Creator is not, and was not intended to be, set forth in that evident and tangible manner in the creation of spirit, in which

it is exhibited to us in the structure of our bodies. Here we have something that may be seen with our eyes, and handled with our hands, and revolved and appreciated by our minds.

The human body presents to our view system after system, apparently complete within themselves, and independent of each other, yet all intimately connected and interwoven, so as to form one great complicated and incomprehensible system, a system of order, harmony, and regularity, to the intelligent observer, but to the unenlightened mind a mass of confusion. Take the naked skeleton of a man, and study the osteology of his frame, look at the bones of his cranium, his spine, his chest, his limbs, his hands, and his feet. Notice how strength is found where strength is needed; where delicacy, delicacy; where motion, joints and other requisites for moving. Observe the position, size, shape, and relations, of each bone. Consider their structure, their density, and strength, the solidity of some of their parts, the sponginess of others; mark their cavities, protuberances, and processes, and connect all these with their several uses and functions. We see great wisdom manifested in the arrangement of such a number and variety of parts, so as to harmonize with each other, and all tending to the same general purpose. Yet what brittle substances are human bones, and how very flimsy are many of them, and how easily may the whole system be driven to atoms. Truly we are fearfully made. But the wisdom and skill seen in the structure of the skeleton, is greatly augmented by considering its connexions with other systems. What is called the vascular system, may be mentioned as intimately connected with the skeleton. The vessels, in many instances, follow the course of the bones, and the bones are often fitted with grooves, notches, perforations, and cavities, suitable to transmit or contain the vessels. This vascular system is the link of connexion between the solids and the fluids, between the bones and the blood, lymph, chyle, and other liquids. The connexion of this system with the skeleton is most wonderful and surprising. By means of the action of fluids, the most solid and dense bones are

sometimes, in diseases, entirely removed, and in convalescence as completely restored; and so rapid is the action of these vessels, and so thoroughly do they penetrate the hardest bones, that the color of the bones may in some cases be changed, by a change of diet, even in two or three days. Yet the bones and vessels, and their connexions and relations, are but the beginning of the wonderful structure of the human frame. Were we to take a particular view of the muscles, and their connexions with the parts already considered, and particularly the skilful and surprising manner in which they act upon the bones, by means of sinews, and were we to examine the larger viscera of our frames, and their relations and functions, and then look for a moment on the glandular system, and learn the origin, course, and issues of all the secreted fluids, that are daily formed within us, we could then have some faint notion of the intricacies of the anatomy of man, and of the great wisdom requisite to design, and skill to to form such a being. But having taken this view, it would be nothing more than an outline of the great machine. The minutiae must be considered before we can fully learn what is here to be learned of the wisdom of God. In the outline we have faintly marked, we have omitted the most wonderful, most intricate, and most interesting part. We have said nothing of the nervous system. Nothing of the connexion of this system with those already mentioned. The nerves are the seat of all sensation, feeling, sympathy, and affection, and the origin of all motion. Paralyze one set of our nerves, and our power over the muscles and limbs of one side is gone. Paralyze another set, and the muscles of the upper or lower extremities become useless—a third set being destroyed, and we are unable to speak—a fourth, and our reason is gone—a fifth, and the digestive organs are destroyed—a sixth, and we cease to breathe. Nerves are found dispersed over the whole surface of the skin, through every vessel, every organ, every muscle, all the viscera and glands of the body—yea, and in the very bones, and among the cartilages. In every part of our body we have either feeling or power of motion, or are sensible of

involuntary operations. The nerves, by old anatomists were considered as uniform in structure, and functions. But now it is known, that one part of the nerves is completely under the power of the will, and the rest entirely independent of it. They are also divided into nerves of motion, of sensation, of respiration, and sympathetic nerves. The attenuation of all these systems is surprising. We hear anatomists speak of nerves of nerves, of veins of veins, and arteries of arteries. And if it is necessary that all the large veins, arteries, and nerves, should be attended by nerves, veins, and arteries, of a smaller size, may we not suppose that these have others still smaller attending them, and that these last are attended by others still less, and so on *ad infinitum*.

But let us look at man as a spiritual being. How various are his faculties, his desires, his capacities. He is a social being, susceptible of the most tender affections. He is malignant, capable of cherishing the darkest and most diabolical designs, and most bitter animosities. He is active and energetic, bold and venturesome, daring to rise into the air, to dig into the earth, to encompass sea and land, and pry into the secret, and hunt out the unknown parts of the earth. He is frightened by neither the depth, breadth, or storms of the ocean, nor by the height or precipitancy of the most rugged mountains. The beasts of the forest, darkness, dangers, and horrors, are not to stop him. War, with all its train of terrors, is sought by him. Yet he is susceptible of meekness, patience, self-denial, kindness, gentleness, mildness. And he has mental faculties. He remembers things long past, he looks forward to things far ahead, and imagines things that never did or will exist or occur. He can deliberate and decide, or suspend his judgment. And his faculties are never dormant. His memory, his imagination, his judgment and will, are always with him. In an instant he is ready for action with any of his faculties. When we consider his mental faculties, we see that he is wonderfully made. But his duties, his responsibilities, his obligations, his dangers, trials, and temptations, all tell him that he is fearfully made. Every breath he breathes, ev-

ery pulse he feels, every sensation, and operation of his body or mind, ought to teach him that he is fearfully made. But the good providence of God preserves us every moment. In him we have help for every infirmity, and defence against every danger. "For He knoweth our frame, He remembereth that we are dust." "Remember I beseech Thee, that thou hast made me as the clay, and wilt Thou bring me into dust again?"

PROSPECTIVE GLORY OF THE UNITED STATES.

THE prospective glory of the United States is a subject which overwhelms the imagination. No citizens of ancient or modern times ever had such a country to contemplate as those of the United States. So vast, so fruitful, possessing every climate, from the cold of the north, to the balmy airs of the tropics; every plant, from the great pine of the Aroostook, to the delicate jessamine of the Rio del Norte. Within our boundaries are the foundation of untold wealth, our mountains are filled with the riches of every mine, our valleys invite the hand of cultivation, and smile, as none other, on the labors of the husbandman. The troubled waves of the Atlantic, and the stiller waters of the Pacific, lave our coasts; our ships whiten the ocean, and the loved flag that waves over them, is the harbinger of liberty, and the protection of the powerful and brave. In examining our geographical limits, we find within it, the extent of ancient and modern empires still left in wilderness, yet by the enterprise of our citizens, the additions of new states almost realize the prophecy of "a nation being born in a day." The ultimate history of our country seems too vast for human conception. The experiment of millions of men living under a republican government, and left to the fruition of the unfettered body and free mind, joined together in advancing the interests of humanity, and accomplishing the highest perfection our nature is capable of, who can conceive the result?

The United States have a frontier of over 10,000 miles, a seacoast of nearly

4,000 miles, and a lake coast of 1,200 miles. One of its rivers is twice as long as the Danube, the largest river in Europe. The Ohio river is 600 miles longer than the Rhine, and the noble river of the Hudson has a navigation in the "Empire state" one hundred and twenty miles longer than the Thames. Within Louisiana are bayous and creeks, that are almost unknown, that would shame by comparison the Tiber or Seine. The state of Virginia alone is one third larger than England. The state of Ohio contains 8,000 square miles more than Scotland. The harbor of New York receives the vessels that navigate rivers, canals, and lakes, to the extent of 3,000 miles, the distance from America to Europe. From the capital of Maine to the "Crescent city," is 200 miles further than from London to Constantinople, a route that would cross England, Belgium, a part of Prussia, Germany, Austria, and Turkey. The increase of population has been rapid beyond precedence, and in accordance with the country itself. At the close of the revolution, the United States contained a population not twice as large as the present city of London; in less than fifty years, it has increased into seventeen millions, and this population the amalgamation of the finest European races, "forming a national character having for its basis the irresistible energy and steady courage of the Anglo-Saxon, in which are mingled the religious tenacity of the thrifty Scot, the generous bravery of the quick-witted Irishman, the sanguine and elastic spirit of the mercurial Frenchman, and the patient, persevering industry of the honest German."

Yet all this has been accomplished within the ordinary lifetime of an individual. There are those in our land that were present at the birth of the nation, and have witnessed its wonderful growth. The future—pressed on by the accumulated energies of the last fifty years—will develop results in arithmetical progression, more wonderful; and as the imagination attempts to draw a picture of the future, the mind shrinks from the conception, and the judgment and fancy are destroyed, in the presentation of the not half-conceived reality.

BE INDUSTRIOUS.



HERE is no situation in life, which affords so much comfort and enjoyment as that of having body and mind constantly employed. Although there appears to be in the minds of most people a natural antipathy to labor, yet it is well known, and generally admitted by those whose circumstances have at times required incessant labor, and at other times perfect leisure and exemption from care, that there is vastly more enjoyment in industry than in idleness. It is the plain and express duty of every person to be industrious, and to improve every hour of their time, in the full exercise of their natural strength and faculties, in the most useful employment. No circumstances in life can furnish an excuse for a neglect of this duty. We would not, in these remarks, wholly prescribe recreation; but a well-balanced mind will find the most healthy and pleasant recreation in exercises which are decidedly useful and beneficial to themselves and others. For example: a boy takes pleasure in the exercise of hauling a little cart loaded with earth or stones, though there be no advantage in the removal of those articles; but does he find any less pleasure, under a consciousness of doing good, when removing the same materials from a place where they were an encumbrance, to another place where they are wanted? Certainly not. Or if a miss finds pleasure in walking in the fields, that pleasure is rather enhanced than otherwise, if she can accomplish something useful by the walking.

It is a common thing for men, during their labor, to derive an enjoyment from the anticipation of the pecuniary compensation which they are to receive therefor, but this kind of enjoyment is far inferior to that of one who rejoices, during his labor, in the consciousness of performing a duty, and a sense of divine approbation. The scriptures of divine truth, which alone furnish perfect laws and rules of duty, and guide to happiness, contain many injunctions to industry and diligence in business; and

that for the purpose, not of acquiring wealth, but of doing good. The word "avarice," is not to be understood to imply a desire of earning or gaining, but of retaining or hoarding what has been acquired of wealth. But our subject is the duty of industry and diligence. If any man entertains and cherishes the true principle of sympathy and benevolence, deriving more pleasure in relieving the sufferings of his fellow-mortals, than in the possession of such articles of wealth as are not utterly indispensable, there will be no danger of his being either idle or miserly. But the neglect of improvement of an hour of time is as decidedly a crime, as the wasting of money or property; and the neglect of doing good to others when opportunity occurs, is decidedly incompatible with the character or hope of a true Christian, for "he that knoweth to do good and doeth it not, to him it is sin."

HOPE.

HOPE is the connecting link between the past and the future. It is a constant prophet, save that it always dresses out events to come in a gaudy hue, which fades and blackens when the wheels of time bring us to the consummation. Were it not for this earnest of the future, this principle implanted in the breast of man, he would have nothing for which to live, nothing to induce him to drag out a miserable existence. Never is hope so wild and imaginative, and we may say, so deceitful as in youth; never so sober, so true, so stable, as in age.

Although hope is often delusive, yet, in the greatest misery, the least flickering ray of sunshine peering into the caverns of the heart, revives the drooping soul, and excites action, as when some precious gem, under the sun's beam, flashes its radiance round the darkened cell and springs into multiplied existence.

Hope is an eternal principle. Though in the last strait, man never ceases to hope; when the spark of life departs, it flies heavenward, and is rekindled upon the altar of eternity!



Portrait of Alexander enlarged from a Coin.

ALEXANDER.



F kings and warriors, no one has acted so eminent a part on the mighty stage of the world as Alexander, commonly called the Great, third king of Macedonia of that name. Cæsar, the other great conqueror of antiquity, the equal probably of Alexander in ability, and his rival in renown, had far less influence on the destinies of mankind; for the un-

wieldy commonwealth of Rome before his time was tending fast toward a despotism, and it remained only to be seen whether that despotism should be committed to Pompey or to him—to the representative of the aristocratic, or the favorite of the democratic party. The life of Alexander, on the contrary, was one of those critical epochs which have changed the history of the civilized world. It was foretold in prophecy as one of the appointed means of working out the decrees of the Almighty; it cast down the mighty empires of the earth, it substituted new dynasties, new manners, and a new language over

the richest part of the known world. It forms a turning point, a link of sacred and profane history, and as such possesses a great and lasting interest, independent of that seductive glory which waits upon brilliant qualities and wonderful actions set off by success.

The Macedonians, of whom Alexander was the hereditary king, had in the more brilliant times of Greece been regarded as little better than barbarians, unworthy of being ranked with the polished citizens of the Greek republics, though the kings of Macedonia were of Argive origin, and traced their descent from the honored line of Hercules. Philip, the father of Alexander, was the first of them who rendered his power formidable to his southern neighbors. He was a brave, able, and ambitious prince, successful equally in negotiation and war. He died B. C. 336.

Alexander was born at Pella, B. C. 356. As by his father he claimed descent from Hercules, so by his mother Olympias, of the royal house of Epirus, he traced his line to Achilles. His education was conducted with care and judgment, and he grew up robust and active, skilled in military exercises and the use of arms. In running and riding he was pre-eminent; and one of the most celebrated actions of his youth was the taming of a magnificent Thessalian horse, which had been offered for sale to his father, but refused, as being so fierce that no one could ride it. This was the celebrated Bucephalus, who, after carrying Alexander through his Persian campaigns, died in the battle against Porus, on the banks of the Hydaspes, leaving his name and fame (like the no less celebrated Rozinante) as an inheritance for all of his respectable species. Alexander's mind was not less carefully cultivated than his body. At the age of fifteen he was placed under the immediate superintendence of Aristotle, who continued near his person until he set out on the invasion of Persia. It is conjectured that the philosopher composed for his use the valuable treatises still extant, on logic, poetry, &c.; and there is a letter extant in which he upbraids his tutor "for publishing those branches of science hitherto not to be acquired except from oral instruction. In what shall I excel others, if the more pro-

found knowledge I gained from you be communicated to all?" The passage may serve in some respects as a key both to the good and evil of Alexander's temper. Ardent in the pursuit of excellence, his motive and object seems rather to have been the desire to excel others, rather than excellence in the abstract, and for its own sake; as in the very instance now under review, in which knowledge was avowedly sought and esteemed for selfish purposes. How great his progress in abstract science may have been, we have no means to determine; that his talents were carefully improved is evident. His style in speaking and writing was clear and pure, his capacity was suited no less to civil than to military business, above all, he had that talent for command, that ascendancy over the minds of others, which seems a part of the natural constitution of those who enjoy it, unattainable, though improvable, by study. To judge from the results, his moral must have been inferior to his intellectual training: he was rash, headstrong, hot-tempered, and selfish, as all must be who can not bear even an equal, and with whom, therefore, self-aggrandizement is the first object of life. That Aristotle, master as he was of moral philosophy, had not taught his pupil the art of self-government, is evident from the anecdotes of Alexander's youth, as well as from the excesses of his maturity. But we must not forget that the gifts of nature and of fortune combined in this instance to enhance the difficulty of inculcating or of practising self-control.

Such as we have endeavored to describe him, at the age of twenty, Alexander came to the throne. The suddenness of Philip's death, and the youth of his successor, gave to all those who had borne with anger and impatience the rapid increase of Macedonian power, a favorable opportunity, as it then seemed, of emancipation. Dangers and rebellions surrounded Alexander on all sides, but decision and promptitude saved him. He marched an army at once into Thessaly, and having by his unexpected presence nipped in the bud the plots of the discontented party, he proceeded to Thermopylæ, where the Amphiptyonic counsel recognised him, in place of his father, captain-general of

Greece. This decree was confirmed by a general assembly at Corinth; at which he was empowered to follow out his father's designs, by taking command of the whole Greek nation in prosecuting the war against Persia. The Lacedæmonians alone dissented, saying that it had ever been their privilege to lead, and not to follow. It was on this occasion that the celebrated interview between Alexander and Diogenes took place, when the surly philosopher requested, as the only favor which he needed, that the king would move from between him and the sun.

In the spring of 335 B. C., he undertook an expedition against the northern barbarians, and forced his way to the banks of the Danube. Having re-established in that quarter the terror of the Macedonian name, he concluded peace with the Triballi and Getæ, and turned westward against the Illyrians and Taulantii, warlike nations dwelling on the coast of the Adriatic. While he was thus engaged a report of his death became current in Greece, and emboldened the Thebans to attempt the recovery of their independence. On receiving this intelligence Alexander returned southward by forced marches, and arrived at Thebes before the rumor of his death had been even contradicted. He took the city by storm, levelling most of the buildings with the ground, a blow from which Thebes never recovered.

The Athenians had been active in stirring up discontent against Alexander; and having been of counsel with the Thebans, had cause to apprehend a similar fate. But Alexander received their excuses, and, returning to Macedonia, employed the winter in preparation for the grand design of conquering Persia. In the spring, B. C. 334, he commenced his march.

The force with which he undertook to overthrow the greatest empire of the world, in wealth and extent, is computed at 30,000 infantry, and 4,500 cavalry. Of the former, 12,000 were Macedonians, 12,000 Greeks; the rest were Thracians, and of other northern tribes, forming an excellent body of light-armed troops. The cavalry was chiefly composed of Macedonians and Thessalians. The Hellespont was crossed at Sestos, and a landing effected in Asia without opposition. After several engage-

ments in which he was victorious, he met Darius in person, waiting to defend his crown. Battle was joined about 30 miles north of Antioch, in the plain of Issus, between the sea and the mountains of Amanus. The numbers of the Persians were vast, greater probably than had been collected since the armament of Xerxes; and of those near 150,000 including 30,000 Greeks, were disciplined, and ought to have been effective troops. The Greeks, in the centre of the field, well played their part, and resisted successfully the formidable assault of the phalanx, as the close and deep array of Macedonian infantry, armed with long pikes, was called. But the success of the Macedonian cavalry of the right wing, where Alexander, opposed to Darius, commanded in person, was decisive. Darius quitted the field; and, as usual in an eastern army, the flight of the sovereign was the signal of dispersion. The victory was complete. He then proceeded to Tyre, which after seven months siege was taken by storm. After conquering Palestine, he went to Egypt, where he laid the foundation of the city of Alexandria.

Darius having collected a second army while Alexander was in Egypt, he returned and met him near Gaugamela. The scene of action was an extensive plain, bounded on the east and west by the meeting streams of the Lycus and Tigris, and to the north by the Gordyæan mountains. Darius had chosen this as his battle-field; and had carefully levelled it, to give the best advantage to his war-chariots and cavalry. His enormous force is calculated by the Greek historians at a million of infantry, 40,000 cavalry, 200 chariots, and 15 elephants; a force so infinitely superior in number to the Greek, that even if we strike off one half of the numbers, it derogates little from the honor of the victors. The victory was decisive. Darius fled toward Ecbatana, while Alexander proceeded to gather the spoils from the wealthy cities of Assyria and Persia. Here he remained sometime, receiving the homage of or subduing the various portions of the empire.

In the autumn of 327 B. C. he commenced his march to India. His route lay at no great distance from the southern foot of

the Paropamisus, the western portion of the great Himalayan range, through warlike tribes, with whom he had several sharp though obscure battles, and was twice wounded before he reached the Indus. Our limits will not allow us to follow him through all his campaigns in India.

On his return Alexander found disorders to be corrected and delinquents to be punished; for the satraps, as usual, when the supreme authority is far distant, had presumed upon the chances of impunity, to indulge in corruption and oppression. It is to be mentioned to the king's honor, that he never turned a deaf ear to the complaints of the commonalty, or suffered such misconduct on the part of governors to pass unnoticed.

At Babylon, Alexander proposed to fix the capital of his empire. His active mind was now teeming with plans of another kind than those of conquest, for they tended to develop the resources and increase the wealth and happiness of his realms. He ordered ships to be built on the Caspian sea, to explore those desert waters which in the utter ignorance of geographers were then believed to communicate with the Indian ocean. He commenced a dock at Babylon large enough to contain one thousand ships of war, and sought in all quarters the best seamen of the Mediterranean, in hopes of rendering his metropolis the emporium of eastern commerce, and a rival of what Tyre had once been. He bestowed much care in organizing and disciplining a new force composed of natives of the east, officered by Macedonians, analogous to the East India company's native troops. He meditated a new expedition for the conquest of Arabia by land and sea, intending to circumnavigate that peninsula from the mouth of the Euphrates to the gulf of Suez. And one of the most beneficial, and perhaps not the least costly and difficult, of his undertakings, was to restore the dikes and canals, by which, in the palmy days of Assyria, the flow of the great rivers had been so regulated as to convert that tract, naturally barren, into the most fertile country of the known world.

While engaged in these manifold proj-

ects, Alexander was seized by a sudden illness. Rumors of poisoning, as is common when great men die suddenly, were spread abroad; but these have neither probability nor evidence to confirm them. According to the best accounts, he died of fever, caught most likely in superintending the works which we have just mentioned, in the swampy plains of Babylon, and aggravated by imprudent conviviality. A diary of his illness, the first series of royal bulletins extant, is preserved in Arrian. He died on the eleventh or twelfth day, about midsummer, B. C. 323. His body was carried to Alexandria; and a beautiful sarcophagus brought thence, now in the British Museum, has been honored with the title of his tomb.

He left no distinct declaration of his wishes as to a successor, and no born child, but his wife Roxana was pregnant at his decease. It is said, that being asked to whom he bequeathed his empire, he replied, "To the strongest;" and that he foresaw a bloody competition at his funeral games. The prophecy was so obvious, that we may readily suppose it genuine, and it was amply fulfilled.

BIRDS OF PARADISE.

1. *Paradisea apoda*. The Emerald.
2. *Paradisea aurea*. The Siflet.
3. The Incomparable; (Le Vaillant).
4. The Cloudy; (Le Vaillant).
5. *Paradisea superba*. The Superb.



ANY of the narratives of the older naturalists are little more than amusing fables. To deduce the leading characteristics of an animal

from a minute investigation of its physical construction—to watch its habits with anxious solicitude in its native haunts—formed no part of the care of those who compiled books of natural history a century or two ago. Whatever



Birds of Paradise.

was imperfectly known was immediately made the subject of a tale of wonder. The old accounts of the birds of paradise are striking examples of this disposition to substitute invention for reality. Now and then some traveller brought to Europe the skin of a beautiful race of birds, of whose habits he knew nothing, except what he learnt from the natives who collected them. Their plumage was of the most brilliant lustre; some were covered over the breast and back with tippets of the richest hues; others had long delicate lines of feathers, prolonged from beneath their wings, or branching from the head; and most of these trappings appeared too fragile for any use, and incapable of bearing up against the rude winds which visit the earth. The specimens were also deprived of feet. Fancy had thus ample materials to work upon. These birds, tender as the dove, and more brilliant than the peacock, were described as the inhabitants of some region where all was beauty and purity, where no storms ever ruffled their plumage, where they floated about on never-tiring wings in a bright and balmy atmosphere, incapable of resting from their happy flight, and nourished only by the dews and perfumes of a cloudless sky. They were called *birds of paradise*: and the few specimens that Europeans saw were supposed to have accidentally visited some sunny spot of our world, rich with flowers and spices, but not their true abiding-place. Such were the tales that the old writers of natural history adopted; and to which even scientific persons appeared to give belief, when they named one of the species *paradisea apoda*, the *feetless* bird of paradise.

The most correct description of the birds of paradise is that given by Gaimard, one of the naturalists who accompanied the French expedition of discovery under Captain Freycinet, in 1817. He observed many of these birds in the island of Vai-giou, one of the islands forming the group of which New Guinea is the principal. They constitute a genus of the order of *Omnivores* (eating all things). Their principal food is fruit and insects, and the strength of their beaks and feet admirably fit them for sustaining themselves in the thick woods where they dwell. They

delight in the most inaccessible parts of forests, and when the weather is serene, they perch themselves on the topmost branches of the highest trees. They fly with great rapidity, although they constantly direct their course against the wind. This is a proceeding which they are compelled to adopt, in consequence of the luxurious trappings with which nature has clothed them; for the wind pressing in the direction of their long feathers, holds them close to their bodies: in a contrary direction their plumage would be ruffled, and their loaded wings would act with difficulty. They, however, seldom venture from their retreats in rough weather. At the approach of a storm they entirely disappear, instinctively dreading the hurricane, which they would be unable to meet, and before which it would be equally dangerous to fly. They are extremely courageous, ready to attack any bird of prey that excites their alarm. They have never been seen in a state of domesticity among any of the Papou tribes, inhabiting the islands where they are commonly found. Of their nests, their mode of hatching, and their care of their young, nothing appears to be known.

In the annexed engraving we have grouped together some of the more splendid of the birds of paradise, as given by Le Vaillant, in his work on birds. The species No. 1 (*par. apoda*), is very remarkable for the beauty of its plumage, which is of the most varied and brilliant colors. It is especially distinguished by the long curved fillets which spring from beneath its wings, and extend in length about two feet. No. 2 (*le sifilet*), is so called from the six fillets which adorn its head. Nos. 3 and 4 are drawn and described by Le Vaillant. The latter is represented displaying its splendid plumes as the peacock does his tail. No. 5 (the superb) exhibits pretty clearly the nature of the plumage of the birds of paradise. The sort of tippet upon its breast, and the fan-like ornaments of its shoulders, have no connexion with either the wings or the tail. The bird has the power of raising or depressing them; but they do not appear to assist its flight. Those on the shoulders fold down over a part of the wings like a mantle. In dimensions the

various species differ considerably. The bodies of most are not larger than that of a thrush, although the thickness of their plumage makes them appear the size of a large pigeon.

One of the most beautiful of the birds of paradise is called the king-bird (*paradisea regia*). Of this species many curious stories are current in the islands where these birds are found. The natives aver, for example, that the two principal species of paradise birds have each their leader, whose imperial mandates are received with submissive obedience by a numerous train of subjects; and that his majesty always flies above the flock to issue his orders for inspecting and tasting the springs of water where they may drink with safety—the Indians being in the practice of taking whole flocks of birds by poisoning the water where they resort to drink. Le Vaillant considers that this notion originated from the casual observation of a strange species among a gregarious flock. This explanation accords with the account given by M. Sonnerat of the manners of the king-bird of paradise; for being a solitary bird, going from bush to bush in search of the berries upon which it feeds, it may occasionally be seen near the flocks of those which are gregarious, where its singular plumage must render it conspicuous.

These gorgeous trappings of the various species of the birds of paradise excite the cupidity of man. The feathered skins form a large object of commerce between the people of the New Guinea islands and the Malays.

The natives entrap the birds or shoot them with blunt arrows. They prepare the skins with considerable nicety, having removed the true wings, which are not so brilliant as the other feathers, and cut off the feet and legs. The absence of feet in all the specimens brought to Europe, gave rise to the fable that the birds of paradise had no power of alighting, and were always on the wing. Their migratory habits may probably also have given some color to this tale. At the nutmeg season they come in flights from the southern isles to India; and Tavernier says, "The strength of the nutmeg so intoxicates them that they fall dead drunk to the earth."

SABBATH THOUGHTS.

MANY and thrilling are the associations which the weekly recurrence of the sabbath brings. The sun of a sabbath morn first shed light on a finished creation. When the ball we tread on stood out a complete and lovely thing before its Maker; when Eden bloomed a little heaven below, and man, with his pure and lofty spirit, lived in its bowers; ere yet the trail of the serpent was over all, "God blessed the seventh day and sanctified it." The beams of a sabbath morning first shed light on a ransomed creation. Then it was that the Captain of our salvation, having battled with Death in his own dark domain shivered his fetters, rose a victor from the tomb, led captivity captive, and gave gifts unto men; so that now, instead of the wo and shame sin had entailed upon the fallen, there is proffered to them the beauty, the brightness of a purchased immortality. The sabbath is a type, and tells of that rest which remaineth to the people of God—of that hour when the Christian pilgrim shall terminate his long and toilsome march through the wilderness, and cross the threshold of his Father's home—when the Christian mariner shall heave over the last ocean billow, and enter the desired haven—when the soldier of the cross shall lay off his panoply, wear the rich robe and the bright crown. Independently, too, of these grander associations, there is much—much of piety, much of poetry—to make the sabbath-day to a Christian's soul the very "best of all the seven." The image of a gray-haired sire, the family shrine, the domestic Sunday-school, the "big ha' bible, once his father's pride," the music of the church-bell, the house girt round with the graves of his kindred, devotion's lofty peal—Oh! it can not be that the man is on his way to heaven who loves not as his life this atom of heaven dropped on earth—it can not be that he is of the "peculiar people," who calls not the "sabbath a delight, the holy of the Lord, honorable"—that he has any claim to the character of a religious being, who allows its golden hours to glide away without some thoughts about that inheritance to which it points!

PROTECTION FROM LIGHTNING.



THE apprehension of danger from lightning, and the solicitude to discover and adopt means of security against it, are proportionate to the magnitude of the evils it produces rather than the frequency of their occurrence. The chances which any individual of the population of a large city incurs of being struck during a storm are infinitely less than those which he encounters in his daily walks of being destroyed by the casual fall of the buildings near which he passes, or by the encounter of carriages crossing his path, or from the burning of the house in which he lodges, or from a thousand other causes of danger to which he exposes himself without apprehension. Still, even those who possess the greatest animal courage are struck with awe, and affected more or less by fear, when exposed to the war of the elements in a violent storm; and there are none who, in such cases, will not willingly avail themselves of any means of protection which they believe to be availing. Augustus entertained such a dread of lightning that in storms he took refuge in caves, thinking that lightning never penetrates to any considerable depth in the ground.

Strong fear, operating on ignorance, has prompted, in times past and present, a multitude of absurd and unavailing expedients, among which, nevertheless, chance seems to have flung some in which analogies to the results of modern science are apparent. When a cloud menaced thunder, the Thracians shot their arrows at it. The arrows being metal, were conductors, and, being pointed, had the virtue of attracting lightning. Pliny states that the Etruscans had a secret method by which they could draw lightning from the clouds, and guide it at their pleasure. Numa possessed the method, and Tullus Hostilius, committing some oversight in the performance of the ceremony, was himself struck. For Numa substitute Franklin, and for Tullus, Richman, and the Roman legend is converted into a true historical record of the last century.

It was formerly believed that persons in bed were never struck by lightning; and a modern meteorologist, Mr. Howard, apparently favors such an idea, by relating two cases in 1828, in which beds were completely destroyed by lightning, while the persons who lay in them were uninjured. Against this, however, many contrary instances may be cited. On the 29th of September, 1779, Mr. Hearthly was killed in his bed, by lightning, at Harrowgate, while his wife, who lay beside him, escaped. On the 27th September, 1819, a servant was killed in her bed at Confolens, in France. In 1837, a house was struck with lightning at Kensington, near London, where a man and his wife were killed in their bed.

The Romans believed that seal's skin was a preservative against lightning; and tents were made of this material for timid persons to shelter under in storms. Augustus was always provided with a seal's skin cloak. However ineffectual may be such an expedient, experience abundantly proves that the material of the dress is not without considerable influence on the course which lightning follows, and may, therefore, augment or diminish the peril of the wearers. When lightning struck the church at Château-neuf-les-Moutiers, during the celebration of mass, of the three priests who officiated at the altar, two were struck dead, and the third was uninjured. The vestments of the last were of silk.

There are some well-attested facts which indicate a relation between color and the movements of the electric fluid. three cases are cited in which horses and oxen having white spots were struck by lightning, and had all the white hair burned off, while the remainder of the hide remained unaltered.

It had been supposed that certain species of trees are proof against lightning, and never struck by it. Tiberius was accustomed to wear a crown of laurel, from the idea that lightning never struck it.

The beech-tree is said to be a non-conductor of lightning. So notorious is the fact, that the Indians, whenever the sky wears the appearance of a thunder-storm, leave their pursuits and take refuge under the nearest beech-tree. In Tennessee

the people consider it a complete protection. Dr. Becton, in a letter to Dr. Mitchell, states that the beech-tree is never known to be struck by atmospheric electricity, while other trees are often shattered into splinters. May not a knowledge of this afford protection to many when exposed?

When assailed by a storm in an open plain, the danger is greatly augmented by seeking the shelter of a tree. Experience and theory combine to prove this. The position of greatest safety is such a distance from the tree that it shall act as a conductor, diverting the lightning from the place assumed for safety. A distance of half a dozen yards may serve for this purpose.

Glass, being a non-conductor of electricity, is generally supposed to have a protective virtue. Thus it has been presumed that a person enclosed in a cage of glass exposed to a thunder-storm, would be in absolute safety. This is proved to be a fallacy by many examples of lightning striking and penetrating the panes of windows and the frames of conservatories.

Nothing is more clearly established than that pieces of metal of any kind, carried about the person, augment the danger of being struck by lightning; and this increase of peril is greater in proportion to the magnitude of the metallic appendages. That this material principle, illustrating as it does, one of the elementary laws of electricity, may be appreciated as fully as it ought to be, we shall here cite some of the numerous recorded examples of it.

On the 21st of July, 1819, lightning struck the prison of Biberac, in Swabia, and, passing into the grand hall, struck an individual prisoner who was one in a group of twenty; the nineteen others were untouched. This individual was a brigand chief, who, being under sentence, was chained round the waist.

When Saussure and his party were at Breven, in 1767, the metal band and gold button on the hat of M. Jallabat emitted sparks.

Constantini relates, that in 1749, a lady wearing on her arm a gold bracelet, raised her hand to shut the window during a thunder-storm, the bracelet suddenly dis-

appeared, not the slightest trace of it remained. The lady was slightly wounded. Brydone relates that a lady of his acquaintance, Mrs. Douglass, sitting at an open window, during a storm, had her bonnet completely destroyed, but suffered no injury in her person. He accounts for the wire of the form of the bonnet attracting the lightning.

These, and many other instances might be mentioned, sufficiently proving that safety is best consulted in time of storm, by laying aside all metallic appendages of the person, such as chains, watches, earrings, hair ornaments, &c. The source of the greatest danger is in the bars or plates of steel which are used in the corsets of females, and which ought to be abandoned by all ladies who do not desire to invite the approach of lightning.

It has been already shown that when lightning passes along a line of conducting matter, the only points where explosion takes place and damage ensues, are at the parts where lightning enters and leaves the conductor; and as a necessary consequence of this, all interruption of continuity in any part of a conductor or series of conductors is attended with explosion and corresponding damage. Since, then, the bodies of men and animals afford a free passage to the electric fluid, it may be expected by analogy, that when lightning is transmitted through a chain of animals, either in mutual contact, or connected by conductors, the chief if not the only injury would be sustained by the first and last individuals of the series. This principle is accordingly supported by the results of experience. The following instances will illustrate it:—

On the 2d of August, 1785, a stable at Rambouillet was struck by lightning. A file of thirty-two horses received the fluid: of these, the first was laid stiff dead, and the last was severely wounded. The intermediate thirty were only thrown down.

On the 22d of August, 1808, lightning struck a schoolroom in Knonau, in Switzerland. Five children read together on the same bench: the first and last were struck dead, the other three only sustained a shock.

At Flavigny (Cote d'Or), the lightning struck a chain of five horses, killing the

first two and the last two, the middle horse suffering nothing. At a village in Franche-Comté, lightning struck a chain of five horses, killing the first and last only. At Praville, near Chartres, a miller walked between a horse and a mule loaded with grain: lightning struck them, killing the horse and mule. The man was unhurt, except that his hat was burnt and his hair singed.

The danger from lightning during storms may be lessened, by observing some precautions suggested by the known properties of the electric fluids. Chimneys often afford an entrance to lightning, the soot which lines them being a conductor. Keep, therefore, at a distance from them. Avoid the neighborhood of all pieces of metal, gilt objects, such as the frames of glasses, pictures, and chandeliers. Mirrors, being silvered on the back, augment the danger. Avoid the proximity of bell-wires. The middle of a large room in which no chandelier is suspended, is the safest position, and is rendered still more so by standing on a plate of glass, or a cake of resin or pitch, or sitting on a chair suspended by silken cords.

The danger of being struck with lightning is augmented by being placed in a crowd of persons. The living body being a conductor of electricity, a connected mass of such bodies is more likely to be stricken, for the same reason that a large mass of metal is more liable than a small one.

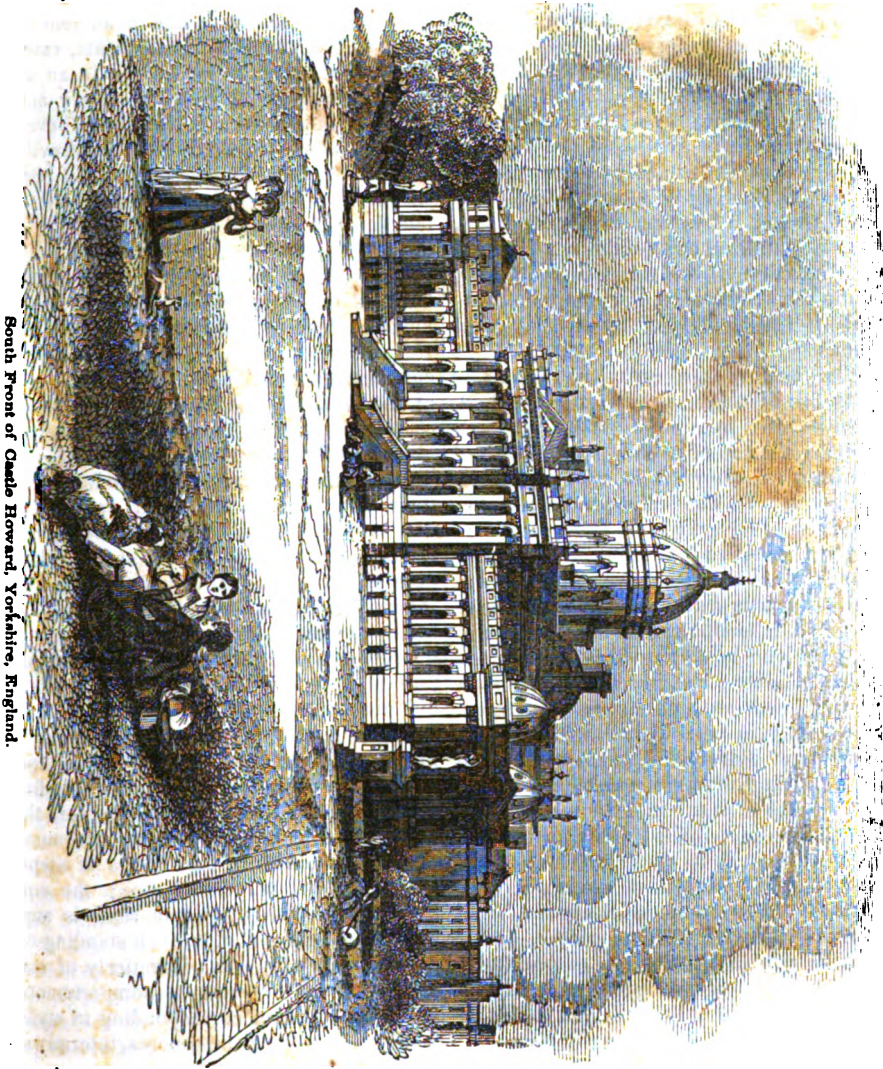
CASTLE HOWARD.



THE superb mansion of Castle Howard, is situated in a noble park about six miles west of Malton, in Yorkshire. The exterior of the edifice, as a whole, is grand and imposing, though not free from the charge of want of unity in its parts. The design for the buildings was made by Sir John Vanbrugh, the eminent architect of Blenheim; but one of the wings was built

much more recently by Sir James Robinson, and to him is owing the alleged incongruity. The front is very long, and the whole pile, with its cupolas, its roofs, and its massy clustered chimneys, is stupendous. The approach is through an ancient gateway flanked with appropriate towers. The site of the present mansion was formerly occupied by the old castle of Hinderkelf, which was destroyed by an accidental fire. Castle Howard, its successor, was erected by the third earl of Carlisle, as he has himself informed us in some verses, amiable in sentiment, but not remarkable for spirit or elegance. The north front consists of an elaborate centre of the Corinthian order, with a cupola rising over the top, and on either side extensive wings, the east according to the original design, the west from Sir James Robinson's. The south or garden front is also very magnificent. Its centre, consisting of a pediment and entablature supported by fluted Corinthian pilasters, is approached by a grand flight of steps, and the view from these of the whole front is strikingly noble. At the extremity of the east wing is the kitchen with square towers at the angles. Before the south front a beautiful turf terrace, decorated with statues, extends away from the house for the space of half a mile, where it terminates in an Ionic temple with four porticoes, and a beautiful interior. The cornices of the door-cases are supported by Ionic columns of black and yellow marble; and in the corners of the room are pilasters of the same beautiful material. In niches over the door are various ancient busts. The floor is disposed in compartments of antique marble of various colors, and the whole crowned with a richly gilded dome.

The interior of the castle fulfils all that the imagination, warmed by the outward grandeur, can expect or desire. The lofty and richly decorated rooms are everywhere teeming with objects of curiosity and vertù, and with the works and masterpieces of human skill, pictures, statues, and busts. To give our readers an adequate idea of the amazing riches scattered about in the greatest profusion, and attracting the eye in every apartment of the building is impossible. The pictures, for



South Front of Castle Howard, Yorkshire, England.

instance, are too numerous to allow us even to mention their names, although they are almost inestimable in value, as they are almost countless in number. Among them are works by almost every great master. There are three paintings in particular, which formed a portion of the celebrated Orleans gallery, and which found their way to England during the troubles of the French revolution. One is the "Finding of Moses," a fine specimen of the characteristic genius of the Spanish painter Don Diego Velasquez; another is the "Entombing of Christ," by Ludovico Carracci, a painting of extraordinary pathos, grandeur, and sublimity. But the most valuable of the three, and not only of the three, but of the whole collection, is the "Three Marys," by Annibal Carracci.

The hall of the mansion, measuring thirty-five feet square, and sixty in height, is surmounted by a dome with Corinthian columns, the top of which is one hundred feet from the floor: it is very handsome and noble. On the walls are representations, by Pellegrini, of the history of Phaëton, with the four seasons, the twelve signs, &c. In recesses are statues of Augustus, Marcus Aurelius, and other works of ancient sculpture. There are also many antique busts on pedestals. In the saloon, a noble room, are many more statues and busts, with a number of pictures. The ceiling is embellished with a representation of Aurora. The chimney-piece of the dining-room is unusually superb. The cornice of white and Sienna marbles, with groups of polished white in the centre, is supported by fluted columns of Sienna marble. Upon it are three fine bronzes. This room also contains two beautiful slabs of Sicilian jasper, and a valuable urn or vase of green porphyry, with many busts and pictures. In the breakfast-room are two elegant tables of verd antique, with various bronzes and pictures; and in a dressing-room are two curious cabinets of precious stones.

The antique gallery, measuring 160 feet by 20, among many other curiosities, contains various rare and beautiful slabs, and a small antique statue, found in Severus's wall, gilt and inlaid. The walls of the drawing-room are richly decorated with

tapestry, from designs by Rubens. In the same apartment are two pedestals of green porphyry, on one of which is a sylvan deity. The museum contains a great assemblage of interesting objects: among these are thirteen urns, wherein were formerly deposited the ashes of ancient heroes, an ancient mask, many busts, vases, &c. In the southwest corner is an object to gladden the heart of every antiquarian, of every scholar, and of every man of taste; we allude to a small cylindrical altar, about four feet and a half high, which is supposed to have stood in the temple of Apollo at Delphi, according to the site ascribed to it by Chandler.

In the centre of four avenues of stately trees in the park, stands an obelisk, one hundred feet in height, bearing on one side inscriptions in Latin and English, commemorative of the valor and successes of the Duke of Marlborough; on the other, the verses we have before alluded to, recording that the plantations around, and the magnificent edifice they enclose, owe their existence to the third earl. The date on the pillar is 1712. The park and grounds are very extensive, and arranged on a scale of grandeur commensurate with the importance of the mansion and the family to which they belong, and the eye is everywhere delighted with the intermixture of lake, lawn, and forest. A splendid mausoleum stands about half a mile from the house. It is a circular building fifty feet in diameter, with a lofty dome, surmounted by a colonnade of twenty-five pillars of the Roman Doric order, the whole standing upon an elevated basement, which is reached by two flights of steps. The inside is very handsome: the cornice from which the dome rises is supported by eight columns, each standing on its pedestal; the dome is entirely of masonry, wrought in elegant compartments, and the pavement, corresponding in style, is inlaid with bronze ornaments, intermixed with various marbles.

The ornaments generally are very light and beautiful. The basement contains sixty-four catacombs built under groined arches. Here repose the remains of the third earl. At the entrance of the wood, which shelters the house from the east, stands a square pedestal decorated with

antique medallions, and supporting an urn with various figures representing the sacrifice of Iphigenia.

Oporto, Portugal.



PORTUGAL is but a small country, in the form of an oblong square, extending from 37° to 42° N. latitude. Its greatest length is 350 miles from north to south, and its average breadth about 115 miles; consequently the area of its surface is about 40,000 square miles, and it is therefore not much more than half the size of Great Britain, and about one fifth the size of France. Yet the fleets and commerce of Portugal at one time were more extensive than those of any country in Europe; and for two centuries, the Portuguese were equally pre-eminent as adventurous and successful navigators. Madeira, the Azores, and parts of the gold coast, were settled by them early in the fourteenth century, and the kings of Portugal placed themselves at the head of that enthusiastic ardor, which, stimulated by the hope of finding a way by sea, to the countries from which the Europeans received ivory, gold-dust, and other commodities across the desert, was at length successful in accomplishing its object. The Portuguese led the way from Europe to India by sea; they planted colonies on the shores of the African continent, from its northern extremities almost to its southern headland; they held possession of extensive territories in India by the right of conquest, and claimed for themselves the exclusive right of navigating the Indian seas. In the new world, Brazil was one of the earliest European settlements; and Lisbon became the great European mart for the productions of India, Africa, and America. Being the first to open new paths to commercial enterprise, and engrossing the trade with newly-discovered countries, great profits were made. When the trade to India was car-

ried on overland, Venice was better situated as an entrepôt for the productions of the east than Lisbon; but when they were brought by sea, Lisbon, situated between the north and south of Europe, was most conveniently placed. The Portuguese endeavored to secure to themselves, if possible, the exclusive advantages which their adventurous spirit had placed in their hands. No other country was allowed to participate in the trade to the Portuguese settlements; and the right to traffic with the natives of newly-discovered countries, was permitted only to those who had sufficient interest to obtain a license, and who were often worthless adventurers. Though, for a considerable period, commerce flourished, and profits were great, the system of monopolies, both in the colonies and at home, was sure to undermine the prosperity of the country at some future period; and many subsequent evils are to be traced to illiberal restrictions framed in the hope of excluding other countries from the African, Indian, or transatlantic trade. These efforts to maintain a monopoly were fruitless; and when other nations became their competitors, Portugal was in her turn shut out from profitable branches of foreign commerce. Thus she was left to her monopolies. Manufactures declined, though, having such extensive colonies, it might have been expected that the demands on the industry of the mother-country would have greatly increased; and the direct object of their restrictive system had been to promote the interests of Portugal. Political events rapidly hastened the crisis which would sooner or later have been occasioned by the unsound commercial policy of the country. In the fifteenth century, Portugal was successfully struggling for maritime and commercial pre-eminence; in the sixteenth century this object was obtained, and the people were reaping the benefits of their enterprise; but from 1580, when Portugal was annexed to Spain, its long and melancholy decline commenced. The authority of the mother-country being relaxed, its connexion with the colonies was weakened, and it was not powerful enough to defend them against aggressions, so that one by one they fell into the hands of the Dutch

or English. Of all its possessions in Africa, India, and the new world, only Madeira, the Azores, and one or two settlements in Africa and India now remain.

In 1640, Portugal once more became an independent state under the sovereigns of the house of Braganza, a member of which is the present occupant of the Portuguese throne. But this revival of its political life failed in quickening industry and commerce, which had gradually sunk into insignificance; and though in fact nominally independent, the principles of vitality which should have rallied and invigorated public spirit, were so stagnant, that foreign support was required to sustain the tottering state.

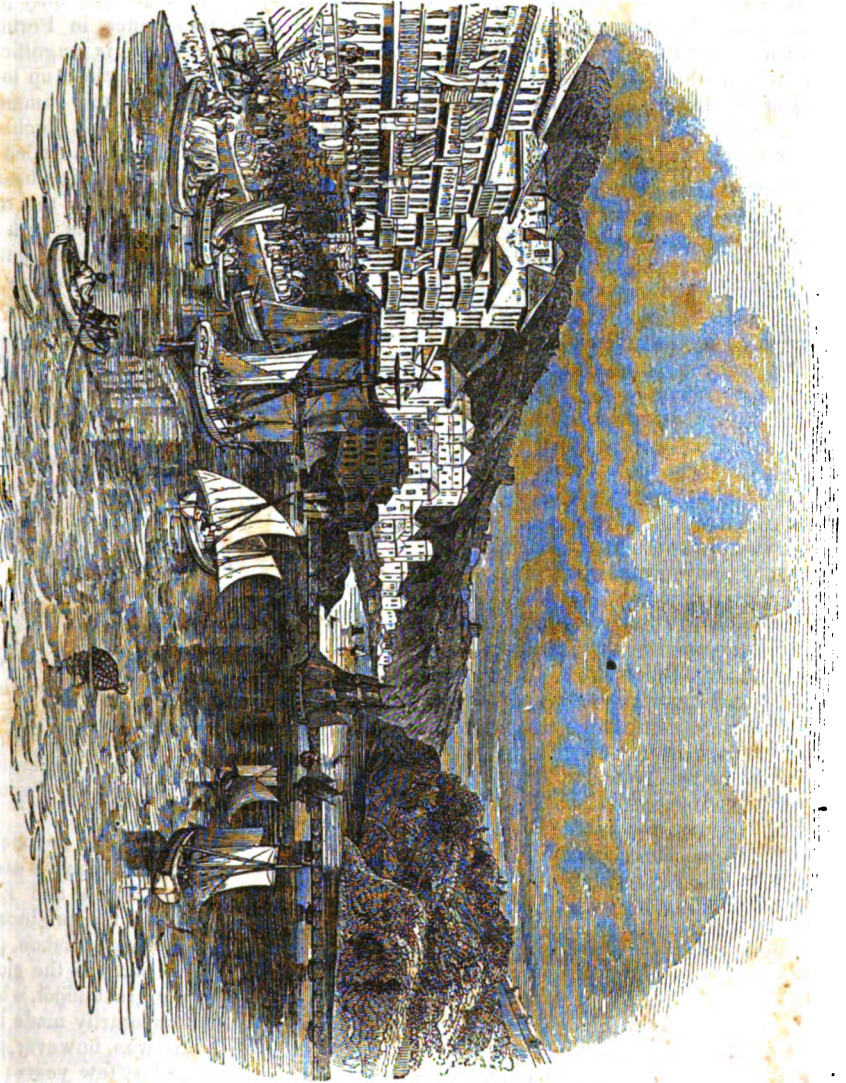
The great wine company of Oporto, established in 1754, was the offspring of the Anglo-Portuguese system of commercial policy. This body of monopolists assumed the right of regulating the production of wine in the upper Douro, which is the most valuable wine district of Portugal; and it even went the length of ordering vineyards to be destroyed, with a view of making the most of their monopoly at the least possible trouble. In the meantime, although the trade of England with France, a country containing more than ten times the population of Portugal, was suffered to decline, being restricted within the narrowest bounds to which the mutual wants of the two countries could be confined, the supposed advantages secured to Portugal failed in conferring those benefits upon her which were anticipated.

Under the administration of Pombal, a minister of superior energy, the country had displayed some signs of life, and useful reforms had been effected, but both were transient benefits, disappearing when the influence by which they had been produced was no longer felt. In 1807, amid the distractions occasioned by foreign invasion, the royal family of Portugal emigrated to Brazil, and from that time until the close of the war, life and property were insecure, and industry languished. After the peace, when the nations began to improve their internal resources, Portugal was not permitted to enjoy the same tranquillity, but was disturbed by civil dissensions, which raged from 1820 to the

expulsion of Don Miguel in 1834, and were but ill calculated to stimulate industry or to allow of the commencement of those enterprises which render a nation prosperous. But the energy and vigor which had distinguished the Portuguese of the fifteenth and sixteenth centuries were no longer the characteristics of the nation. Ignorance and misgovernment had produced their wonted effects. The foreign trade of Portugal, once more extensive than that of any other power, was chiefly carried on at the two ports of Lisbon and Oporto, with English capital; and but for the same stimulus, even the work of reproduction would have ceased in many instances.

At the termination of the late civil war, all the interests of Portugal were, as may be supposed, in a struggling condition; and the physical causes which obstruct the internal activity of the country necessarily render it a work of time to overcome these difficulties. Portugal consists in a great measure of mountain-ridges, divided by chasms. Alemtejo and Beira are the only provinces which contain plains of any extent. The rivers are few, and in summer even some which are navigable at other seasons, are nearly dry; there are no canals, and the roads are wretched.

Thus the traffic between one part of the country and another is insignificant, and local prejudices of the most antiquated date hold undisputed sway in petty districts cut off from each other by ravines and desolate tracts. These circumstances have also their political influence. At present the country is too poor to construct good roads, but Roman energy overcame the natural difficulties which the surface presented, and there are the remains of highways which they formed. The want of roads is greatest in the south, but in the northern provinces the main roads are tolerably good, and there are bridges where they are required, but these are of ancient date, and not the result of recent improvements. The cross-roads resemble the tracks which cover the vast steppes of Russia. There are neither stage-coaches nor any system established by which travellers may pursue their journey with post-horses; Portugal, in this test of civiliza-



Oporto, Portugal.

tion, ranking lower than any other country in Europe. The inns are few in number, and afford very poor accommodation, and, indeed, are to be found in the larger towns. It is evident that there are few arrangements based on the locomotive habits of the people. The wheel-carriages which are in use are in keeping with the roads over which they are to travel, and on many of the roads conveyance by wheel-carriages is not possible, and goods are carried on the backs of mules.

The mines of lead, iron, copper, and other metal, and the quarries of fine marble, all once profitably worked, were neglected. In the fourteenth century, when the population of Portugal was greater than at present, sufficient corn was grown to admit of some quantity being exported; but when trade had dwindled, and agriculture was the chief resource left, Portugal had become a grain-importing country. Butter and cheese are imported in considerable quantities from England and Holland. Cows are seldom kept, goats' milk being usually used. The wool of the sheep in the plains of Beira is of good quality, and greater attention might be advantageously paid to the fleece, which would become an important article of exchange with other countries. The development of the agricultural resources of Portugal, ought, indeed, now to be the great object of her rulers. With a fine climate, and a soil favorable to the production of corn, wine, oil, and a variety of fruits, the aggregate riches of the country might be easily increased. Maize and rice are raised, potatoes are not much cultivated. If irrigation were more generally practised, and other improvements introduced, the surplus produce of the soil would not be confined to fruits, such as oranges, lemons, citrons, chestnuts, almonds, &c., which it requires little exertion to render profitable objects of cultivation. The olive is rather extensively cultivated; but the produce is chiefly consumed at home, the oil forming one of the commonest ingredients of cookery in Portugal. The cork-tree is also a profitable native production. But the vine is the most valuable, and when, in 1765, in accordance with the spirit in which the industry of the country was regulated, the

vineyards on the Douro and Mondego were partially converted into corn lands by order of the government, they did not remain long diverted from their former more profitable uses.

Lisbon and Oporto are the only ports of considerable importance in Portugal. The entrance of the Tagus is magnificent, and ships of burden come close up to the town; but how sadly has the commerce of this once famous entrepôt declined! At one period 400 large ships traded between Lisbon and South America, besides those which were employed in the trade with Africa, India, China, and with the Moluccas, and other distant parts; but the whole foreign shipping of the country has now dwindled to 50 vessels; and in 1838 only 324 vessels entered the Tagus, including steamboats which arrive from England once a week, the aggregate tonnage of these 324 vessels, being 53,728 tons. London and Liverpool are the principal ports engaged in the trade with Portugal; vessels from these places proceed with general cargoes, and return with fruit, wine, wool, and other native produce. Oranges may be bought by retail at one penny sterling per dozen, and of course are much cheaper when purchased wholesale of the grower.

Coal is exported to Portugal from Newcastle and Glasgow, and the vessels which bring fish from Newfoundland and take back salt in return, are British. From other parts of the United Kingdom besides those just mentioned, vessels for Portugal usually proceed in ballast.

The manner in which the decline of foreign commerce occurred, may be easily explained. When the Dutch and English, instead of obtaining the produce of America and the Indies from Lisbon, proceeded direct to those parts of the globe, Lisbon ceased to be the great dépôt, which circumstances had temporarily made her. The trade with Brazil, was, however, preserved until within the last few years; but the monopoly of Portugal ceased when Brazil became an independent country, and England and other countries carry on a direct trade for cotton, sugar, and those articles of Brazilian produce which the mother-country formerly required to be brought to Lisbon previous to their distri-

bution in Europe. The produce and manufactures of Europe, also, instead of reaching the Brazilians from Lisbon, are received direct from the country whose industry has given them an exchangeable value. The obstacles to a more extensive export trade of the native productions of Portugal arise to a great extent from the cost and labor of conveying goods and merchandise; and thus, beyond a certain distance from places which are near a shipping-port or possess some facilities for reaching it, the stimulus to production which foreign commerce excites is not very strongly experienced. Still the trade of Lisbon is extensive, as there are few seaports in Portugal, and mercantile operations are concentrated chiefly in Lisbon and Oporto. The population of Lisbon is about 260,000. Oporto, a view of which is given in the engraving, is the second port of the kingdom, and delightfully situated on two hills near the mouth of the Douro, which winds among steep hills crowned with woods. It is on the left bank of the river, the suburb of Villa Nova being opposite, and connected with Oporto by a bridge of boats. Oporto appears to great advantage after escaping from the filth of Lisbon. The immense magazines of the great wine company are prominent objects of interest. The population amounts to about 70,000. There are, of course, many small ports, but with the exception of St. Ubes, they are merely the resort of coasting vessels. About 500 vessels load annually at St. Ubes with bay-salt, which Portugal exports to the extent of 100,000 tons annually. Ships with fish take back cargoes of this salt, which is of a good quality.

Since 1834, when Portugal entered upon a new era, her prospects have brightened, and if tranquillity be firmly established, and more enlightened sentiments prevail in her councils, the interests of industry will revive.

The monopoly of the Oporto wine company has been abolished. Some judicious reductions of taxes have been made, the currency has been improved, and the land of useless corporations declared public property. The government has determined to lend its aid to the improvement of roads, the construction of ports, the im-

provement of navigable rivers and seaports, and a land-bank, with four branches in different parts of the country, has been projected for the purpose of assisting the manufacturer and the agriculturist in the development of their interests.

STUDY A CHILD'S CAPACITIES.



F some are naturally dull, and yet strive to do well, notice the effort, and do not censure the dullness. A teacher might as justly scold a child for being near-sighted, as for being naturally dull. Some children have a great verbal memory, others are quite the reverse. Some minds develop early, others late. Some have great powers of acquiring, others of originating. Some may appear stupid, because their true spring of character has never been touched. The dunce of the school may turn out in the end the living progressive, wonder-working genius of the age. In order to erect the best spiritual influence, we must understand the spirit upon which we wish to exert that influence. For with the human mind, we must work with nature, and not against it. Like the leaf of the nettle, if touched one way it stings like the wasp; if the other, it is softer than satin. If we would do justice to the human mind, we must find out its peculiar characteristics, and adapt ourselves to its individual wants. In conversation on this point with a friend, who is now the principal of one of our best grammar-schools, and to whose instructions I look back with delight—"Your remarks," said he, "are quite true; and let me tell you of a little incident which bears upon the point. Last summer I had a girl who was exceedingly behind in all her studies. She was at the foot of the division, and seemed to care but little for her books. It so happened that as a relaxation, I let them at times, during school-hours, unite in singing. I noticed that this girl had a remarkably clear, sweet

voice, and I said to her, 'Jane, you have a good voice, and you may lead in the singing.' She brightened up, and from that time her mind seemed to be more active. Her lessons were attended to, and she soon gained a high rank. One day, as I was going home, I overtook her with a school companion. 'Well, Jane,' said I, 'you are getting along very well, how happens it you do much better now than at the beginning of the quarter?'

"I do not know why it is," she replied. 'I know what she told me the other day,' said her companion.

"And what was that?" I asked.

"Why she said she was encouraged."

Yes, here we have it—she was encouraged.

She felt she was not dull in everything. She had learned self-respect, and thus she was encouraged.

Some twelve or thirteen years ago, there was in the Franklin school an exceedingly dull boy. One day the teacher, wishing to look out a word, took up the lad's dictionary, and on opening it found the blank leaves covered with drawings. He called the boy to him.

"Did you draw these?" said the teacher.

"Yes, sir," replied the boy.

"I do not think it is well for boys to draw in their books," said the teacher, "and I would rub these out if I were you; but they are well done, did you ever take lessons?"

"No, sir," said the boy, his eyes sparkling.

"Well, I think you have a talent for this thing. I should like you to draw me something when you are at leisure, at home, and bring it to me. In the meantime, see how well you can recite your lesson."

The next morning the boy brought a picture, and when he had committed his lesson, the teacher permitted him to draw a map. The true spirit was touched. The boy felt that he was understood. He began to love his teacher. He took delight in gratifying the teacher by his faithfulness to his studies; while the teacher took every opportunity to encourage him in his natural desires. The boy became one of the first scholars, and gained the medal before he left the school. After

this he became an engraver, laid up money enough to go to Europe, studied the works of old masters, sent home productions from his own pencil, which have found a place in some of the best collections of paintings; and is now one of the most promising artists of his years in the country. After the boy gained the medal he sent the teacher a beautiful picture as a token of respect, and while he was an engraver, the teacher received frequent tokens of continued regard, and I doubt not, to this day, he feels that that teacher, by the judicious encouragement he gave to the natural turn of his mind, has had a great moral and spiritual effect on his character.

THE OTTER.



LL anglers, with Izaak Walton at their head, have an inveterate hostility against the otter, inasmuch as it may be regarded as their rival in the destruction of the finny race, but not a fair rival, since it is ever upon the spot, incessant in its exertions, voracious in the extreme, and works like a poacher during the night, nefariously thinning the river of the finest fish, and thereby depriving the angler of his anticipated enjoyment. The complaint that "the otter devours much fish, and kills and spoils much more than he eats," is very true; for where his prey is abundant, he only devours the fish from the head downward to the vent, leaving the tail as a witness against him.

Like the fox and wild-cat, the otter is in fact a nocturnal beast of prey, remaining quiet in its retreat till the night has set in, when it begins its depredations, and continues them till the first beams of sunrise warn it to retire. The ease and celerity of its aquatic evolutions during the chase of its victims are astonishing: rapid as the trout is in its motions, arrow-

Otter (*Lutra vulgaris*).



like as is its speed, the otter hunts it down, for his perseverance is equal to his celerity; he follows the fish in every turn and double, and maintains the pursuit with a pertinacity which generally insures success.

Fishes seem to have an instinctive dread of the otter, for it has been seen to collect into a shoal a vast number of trouts in a river, and drive them before it until the greater part have thrown themselves on shore.

The otter usually avails himself of any convenient excavation in the bank overhanging the water, especially if covered and concealed by the twisted roots of a tree, or overarched by intertangled shrubs or bushes. Buffon says that the otter will even take up its abode among piles of floating wood. Sometimes, however, its retreat is at a considerable distance from its usual fishing haunt. In the month of March, or early in April, the female brings forth her young, from three to five in number, upon a bed of sticks or grass, in the excavation she has chosen for their concealment, and she attends them with great solicitude. The strength of the instinctive attachment for her young is thus noticed by Steller. "Often," says he, "I have spared the lives of the female otters, whose young ones I took away. They expressed their sorrow by crying like human beings, and followed me as I was carrying off their young, which called to them for aid in a tone of voice very much resembling the crying of children. When I sat down in the snow they came quite close to me, and attempted to carry off their young. On one occasion, when I had deprived an otter of her progeny, I returned to the place eight days afterward, and found the female sitting by the river, listless and desponding, who suffered me to kill her on the spot, without making any attempt at escape. On skinning her, I found she was quite wasted away with sorrow for the loss of her young. Another time I saw at some distance from me an old otter, sleeping by the side of a young one about a year old. As soon as the mother perceived me, she awakened the young one, and enticed him to betake himself to the river; but as he did not take the hint, and seemed inclined to pro-

long his sleep, she took him up in her fore paws, and plunged into the water." It is during the spring and summer months, while the young of the otter are dependent upon the mother's care, that the destruction she makes among the fish is most considerable; she has not only her own wants, but those of her offspring to provide for, and her exertions during the silent hours of night are unremitting.

The sport of otter-hunting, formerly maintained by country gentlemen for the sake of the diversion, may be regarded as having been brought to a close in England, with the termination of the last century, and is now only practised for the sake of extirpating a noxious animal. At the present day, few or no packs of otter-hounds are kept.

THOUGHTS AND THINGS.



THOUGHTS never die. They are a part of the unseen things that are eternal. The minds in which they spring, or in which they are implanted, have "life everlasting;" and impressions made upon them, never cease to affect their welfare, for better or for worse. They make them better and happier, or worse and more miserable for ever.

Things perish. Most of them soon decay, and the most enduring will ere long be consumed. Our bodies, to us the most valuable and the most curious of things, are but dust, and to dust will shortly return. Impressions made on perishable things, must perish with them. Soon no trace will remain, to show that they have ever been.

He who endeavors to impart thoughts to the minds of men, toils for immortality. If he is successful, the produce, the effects, of his labors will endure for ever. When ages, and millions of ages shall have rolled away, they will still be operative for the benefit or injury of those who receive them.

But he who labors to produce things, labors for what is perishable. The productions of his toil, if it is even as successful as his heart desires, will soon cease to be. He sows to the corruptible, and "shall reap corruption."

The laborer who produces things, may do it for the service of the thought; and then his labors take hold on eternity and are of worth. The touch of faith changes their nature, and imparts to them an infinite value.

Man of thought! honor the man of toil! You could not live to think, and benefit the world by your thoughts but for his toil. It is only when the toiler toils for things as an end, and raises not his eye to the higher good to which those things should be made subservient, that he is worthy, if a human being ever is, to be despised. When he toils for himself as a being of thought, or for others that they may live and think; then he is your worthy brother. If he is, to the extent of his ability, a thinking man, his honor is not the less for his toil.

Man of toil! honor men of thought, whose thoughts are good. There are many such. Some originate thoughts, and others only convey them from one to another. Some impart them to children and youth, in the school or college; and others to adults in the pulpit, or by the press. Some do it by the voice, others by the pen. But in whatever way they work, they are all producing that which will be eternal in its duration and usefulness, and is therefore infinite in its value. The fruits of their labor will still exist and retain their value, when all the productions of the farm and the shop shall have ceased to be. One of them may show you, on a few inches of paper, the produce of many days, or weeks, of earnest effort. It looks small, but despise it not. It may impart a new thought to thousands of minds, and to each of them it may be of endless benefit and of countless worth. If it is evil, it may rend a nation; if it is good, it may save a soul.

It is fit that they who produce what is infinitely valuable, should be well paid for it; and they will be. Men may be so blind as not to see the worth of their productions, and the thinker may not be paid

by them, not be paid with things. It matters little. If he thinks that he may be thus paid for doing, he debases the precious to the service of the vile, and deserves to be unpaid; but if he aims as worthily as he should, at rewards in the world of thought and of eternity, he will find them there; nor mourn that this thoughtless world has paid him poorly.

JUNE.

THE goddess Juno is said to claim the honor of giving name to this month; others assert it to be derived from Junius Brutus. By the Saxons, it was termed *Sere-monath*, or dry month.

June is really, in this climate, what the poets represent May to be—the most lovely month of the year. Summer is commenced, and warm weather thoroughly established, yet the heats rarely rise to excess, or interrupt the enjoyment of those pleasures which the scenes of nature now afford. The trees are in their fullest dress, and a profusion of the gayest flowers is everywhere scattered around, which put on all their beauty just before they are cut down by the scythe, or withered by the heat.

Soft, copious showers are extremely welcome about the beginning of this month, to forward the growth of the herbage.

One of the earliest rural employments of this month is the shearing of sheep, a business of much importance in many parts of the country, where wool is one of the most valuable products.

This country is becoming celebrated for its breeds of sheep, which yield wool of various qualities, suited to the different branches of the woollen manufactory.

The season for sheep-shearing commences as soon as the warm weather is so far settled that the sheep may without danger lay aside great part of their clothing.

Before shearing, the sheep undergo the operation of washing, in order to free the wool from the foulness it has contracted.

KARA HISSAR.



THE town of Kara Hissar, in the province of Anodoli, in Asia Minor, is about 180 miles distant from Constantinople in a direct line; about 200 miles from Smyrna and the Ægean sea; and 130 miles from the port of Adalia on the southern shores of the Mediterranean; consequently it is placed nearly in the centre of the peninsula known under the name of Asia Minor. There are no properly-constructed roads in any part of the Turkish empire, though the remains of the Roman lines of communication are still to be observed, and some of the Roman bridges are yet in use; but Kara Hissar enjoys the advantages which are derived from such roads as are common to the country. The road from Smyrna to the east, toward Armenia, Georgia, Persia, and the countries bordering on the Euphrates, passes through it; and it is the rendezvous of the caravans proceeding from Constantinople. Hence nearly all European manufactures and colonial produce which are distributed to the eastward and southward, pass through Kara Hissar. This renders it a place of considerable importance, and stimulates the industry of the inhabitants; as the numerous caravans which pass through it bring produce and merchandise from distant parts, and the shops are accordingly well supplied. A great proportion of the houses are built of stone.

The manufacture of carpets is chiefly carried on in the country between Kara Hissar and Smyrna; but fabrics of wool and tapestry are among the staple articles of industry in the former place. From the large quantity of opium cultivated in the neighborhood, it is generally called Afium Kara Hissar.

The situation of the town is striking. Lofty and naked rocks rise up on one side, and on the other is a range of high fruitful hills covered with vineyards. A small stream, which in winter and spring is abundantly supplied, runs through the town. The circumference of the town is nearly three miles, it contains ten mosques,

and the population is supposed to exceed 50,000. The castle is situated at the top of a steep rock, nearly 200 yards in perpendicular height. At the summit there is a wall flanked by round towers, within which are some old cannon made of iron bars and pieces of old armor. There are places for holding water, partly of stone, and partly hewn out of the rock, and a deep well. If supplied with water and provisions; the place would be impregnable. This strong natural citadel appears only to have been intended for occasional use in times of trouble. The entrance could be closed by a gate. The western frontier of Asia has often been the battlefield of contending powers, and such a place as this castle might be intended as the last resort of the vanquished. Asia Minor was ravaged by barbarians, and afterward for two centuries endured the tyranny of the Persian yoke.

FORM AND STRUCTURE OF THE EARTH.



NE interesting peculiarity in geology is the close relationship in which it stands to many other departments of science, lending light to them, and receiving it from them in return. The whole subject of organic remains belongs not less to zoology and botany than to geology, and the time is perhaps not far distant when it will be in a great measure resigned to them, and geologists be willing to accept of the facts from the students of these branches of natural history, and only apply them to their own researches. Many parts of it are, in like manner connected with natural philosophy, astronomy, and chymistry; facts from all these sciences forming some of its most elementary principles. The shape, dimensions, and density of the globe, are important elements in astronomical calculations, but of almost equal consequence to the true theory of the earth's structure.



Afyon Kara Hisar, or the Black Castle of Opium.

Our planet is not an exact sphere, but only a near approach to this figure. It is flattened or pressed in at the poles, and bulges out in the region through which the equator passes. In consequence of this, the surface of the sea under this line is about thirteen miles higher or more distant from the centre than at the poles. It is supported at this height by the rotation of the earth on its axis, which has a tendency to throw any loose body off from the surface, in the same manner as a stone whirled round in a sling. Were the earth, therefore, to stand still, the waters would instantly commence flowing toward the poles, and deluge the highest land around them. Such a catastrophe is prevented by the permanent regular motion impressed on the globe, and its stability, with the proper distribution of land and water on its surface, secured by the form which it now possesses. This is, notwithstanding its various inequalities, very nearly that figure which all the particles composing it, if allowed to move freely among each other, would assume. Were the earth fluid, it would acquire this shape exactly, and its near approach to it, is often taken as a proof that it was formerly in that condition. This, however, is not necessarily true, since it may be shown that the causes now acting on the surface—the wearing down of the highest mountains and hardest rocks, and the transportation of their materials from place to place by rivers and tides—would, in the course of time, produce the same effect. It is also but reasonable to suppose, that if the earth was created at first of solid materials, these would be disposed in that form which was most consistent with the continuance and order of the system. Nothing we perceive in nature at all supports the notion, now so prevalent, that the glorious and perfect arrangement of the universe is the mere necessary development of physical laws. The all-regulating hand of the Creator, seems to have been always present in every corner of his works.

To weigh the earth in a balance, might appear to surpass not merely the ability, but the presumption of men. Yet they have not only attempted, but performed this with surprising accuracy, and its specific gravity, or weight compared to that of an

equal mass of water, is known more nearly than that of most bodies on its surface. This is rather more than five times (5.66) that of water, or half that of pure silver, and a third less than iron; gold is more than three times, and platinum and some other metals almost four times heavier, so that only a small part of the interior can be filled with matter nearly equal to these metals in density. The average of the whole globe is only twice that of the exterior crust, and as the pressure in the interior must be enormous, condensing any substance exposed to it to a vast amount, it has not unreasonably been imagined that the interior is filled with substances lighter than those forming the external crust. But the heat which hot springs, volcanoes, and experiments in mines, show to exist in the interior, must act as an antagonist power to the compression, and modify its results to a great extent. Hence much uncertainty prevails in regard to the interior structure of the globe.

That portion of the crust which is accessible to man, is not very extensive; the deepest mine, added to the highest mountain, not exceeding six English miles, or about a thirteen hundredth part of the earth's diameter. Nor is even this visible in any one place, the deepest natural or artificial sections being much less. This crust is composed of rocks, these of simple mineral, and these again of the elementary substances of the chymists. Of the latter, fifty-five or fifty-seven are enumerated, but some of them are very rare, and only found in a few unimportant bodies. The great mass of the earth's crust, consists of scarcely a dozen elements, either alone, or more commonly united with each other in various proportions. These are named simple minerals, which have not only a definite chymical composition, but also a peculiar regular structure, and a tendency to assume certain external forms. This is named crystallization, and is well illustrated by salt or sugar, when slowly deposited from a solution. With rare exceptions, each distinct chymical compound has its own form of crystals, and also peculiar colors and other physical properties, by which they are distinguished from all others. The number of these minerals now known is about four

hundred, but not a seventh of these are of common occurrence, and the vast proportion of rocks are composed of less than a dozen.

Geologists use the word rock in a more extended sense than in common language. All the great extended masses composing the crust of the earth are rocks, and even beds of sand or clay receive the same name. Rocks are either simple, consisting of one mineral, or compound, composed of two or more.

Quartz, or the silica of the chymists, occurs in a great variety of forms. It is itself a compound substance, formed of oxygen, the vital air we breathe, and of silicon, formerly believed to be a metal, but now placed by chymists in a different class. Its compound, silica, is the most abundant substance on the globe, forming more than half of that part of it with which we are acquainted. The common white "chuckie-stones" of children, is one of its most characteristic varieties; the gun-flints of the sportsmen were fashioned from another, the dark color being caused by some extraneous mixture; and the fine pure rock crystal, the Cairngorm stones, the amethyst, cornelian, and jasper, are all other varieties of this mineral, in more or less purity. It has many colors, yellow, brown, red, green, blue, and black, but is most commonly white or gray. It also appears when crystallized in several forms, but very frequently in six-sided prisms, ending in a pyramid with the same number of planes.

Besides the quartz forming the sandstone, two and sometimes three other minerals are found in it. The quartz is usually of a white color and glassy aspect, but along with it is another mineral of a duller white or red color, and less hard, named felspar. Of this there are several varieties, differing in chymical composition. Besides silica and alumina, which form clay when decomposed, the common felspar contains potash; a second variety contains soda, and a third also lime.

Granite, besides these two minerals, contains mica, well known from dividing into thin, transparent, elastic plates, of a bright silvery color. It has so much the appearance of a metal, that ignorant persons often mistake it for silver, and the

yellow varieties for gold. Common granite consists of these three minerals, in various proportions, and is of a white or red color. Besides them, however, a fourth mineral, of a dark green or black color, occurs in it. This is named hornblende, and much resembles another green mineral, named augite.

Of these five minerals, now named, almost the whole rocks on the earth consist, and there are few which do not contain one or other of them. The only other substances of much importance are lime, the carbonate of which forms the common limestone, and marble; and iron, a small proportion of which is found in almost every rock, while its ores, from which the metal can be prepared, are very abundant. From these few minerals, with some others of rarer occurrence, a great variety of rocks are formed, some geologists enumerating from two to three hundred species.

The three kingdoms of nature, the animal, vegetable, and mineral, though widely distinguished, are yet closely connected. The lifeless inorganic mineral could exist without the plant or animal, but these are not equally independent. Not only does the mineral kingdom form the rocks and soil on which they live and vegetate, but from it also they draw their food and nourishment. The plant converts the inorganic elements into a state adapted for the support of animals, which seem incapable of performing this office for themselves, and, on their dissolution, their bodies are again restored to the earth whence they have literally been taken. There is thus a continual wonderful circulation of material elements, from the mineral, through the plant and animal, back to the mineral again. But the plants deriving their support from the soil, it is necessary that they should find in it the various elements on which they exist. Were any of these wanting, they would either perish, or become sickly and unfit for the nourishment of animals. Hence the great importance of the compound nature of rocks, from whose decomposition the soil is formed, as plants are thus furnished with those substances which they require. The two rocks just mentioned are a good illustration of this. The sim-

ple rock, the sandstone, consisting of silica alone, decomposes into a very barren and unfruitful soil. In granite, the silica also prevails, but mixed with six or eight other substances, and the soil, though far from fertile, is much more so than that over pure sandstone; while, hills, though high, are covered with fine grass, and in the south of Europe, with forests of oaks and chestnuts. But still greater variety of rocks, and the more compound soil they produce, are more favorable to vegetation.

The sandstone and granite also furnish good illustrations of some other distinctions of great importance in geology. The name of the former implies that it consists of sand, that is, of grains of a round irregular form. These grains are of various sizes, from a pin head, or even less, to that of a pea or marble. When larger, the rock is named a conglomerate, though its structure of broken fragments is still the same. In granite, the distinct minerals are mixed together in apparently an irregular manner, but each portion has a definite form, is bounded by straight lines or smooth planes, and the rock, when newly broken, shows numerous shining surfaces which reflect the light, instead of a rough uneven fracture like the sandstone. The granite is thus named a crystalline rock, whereas the sandstone is said to be uncrystalline, and this difference is believed to arise from a difference in their mode of origin. Sand—broken irregular grains—is produced by water from the destruction of previous rocks, as on the banks of rivers or the seashore. Where we see heaps of sand strewed on the surface, we immediately conclude that water, and water in motion, has in some former time been there. Grains or crystals, like those of the granite, do not arise in this way. They are only seen to form where the substance composing them has been dissolved, either in a fluid or by heat, so that its particles can unite in a regular manner. Hence it is supposed that granite, and the rocks which resemble it in structure, have been formed in one of these ways, and probably in the latter, or from a state of igneous fluidity.

But, it may be asked, do the external forms of these rocks agree with this mode

of origin deduced from their internal structure? Sand or mud, deposited from water, is seen to form beds or layers of greater or less extent, and these should be seen in the sandstone rocks, if this is the manner in which they have been produced. And such, every one who has looked into a sandstone quarry, must have observed to be the case. The sandstone is, on this account, said to be stratified, or to form strata, a word derived from a Latin verb signifying to strew or spread out, as the materials of the sandstone beds are supposed to have been at the bottom of the sea, or in some other large body of water. The granite having a different origin, does not exhibit this peculiarity. It appears in large irregular masses, divided in various ways, but not into regular beds; and most of the rocks, whose structure is like its crystalline, are also massive and unstratified. Many of them, indeed, appear like a mass of molten metal poured out through an opening on the surface of the ground. Some of these details may seem uninteresting to our readers, but they constitute the first principles of all geological science, and even in themselves are not barren of remarkable results. It was long a favorite endeavor of philosophers, misled by the desire of simplicity, to endeavor to explain all the phenomena of the earth by one agent, by fire or by water. But even these two rocks, found in great abundance in most quarters of the earth, show that neither of these theories is alone sufficient, and that facts require both to be combined. It will also be found that both agents, and the rocks which they produce, serve important purposes in the economy of creation, and produce, by their union and opposition, a system that is far more perfect and beneficial than would have resulted from either of them alone. Even looking at these rocks, in the low and limited light of materials for human dwellings and other edifices, it will be found that each possesses peculiar properties and advantages, which could not have been combined, and one class of which, therefore, must have been sacrificed, had fire or water alone prevailed in the formation of the earth.

TAKE care of your business, and your business will take care of you.

THE NARWAL.



AMONG the cetacea that inhabit the Polar ocean, the narwal, if not the largest, is nevertheless one of the most remarkable. Its general form re-

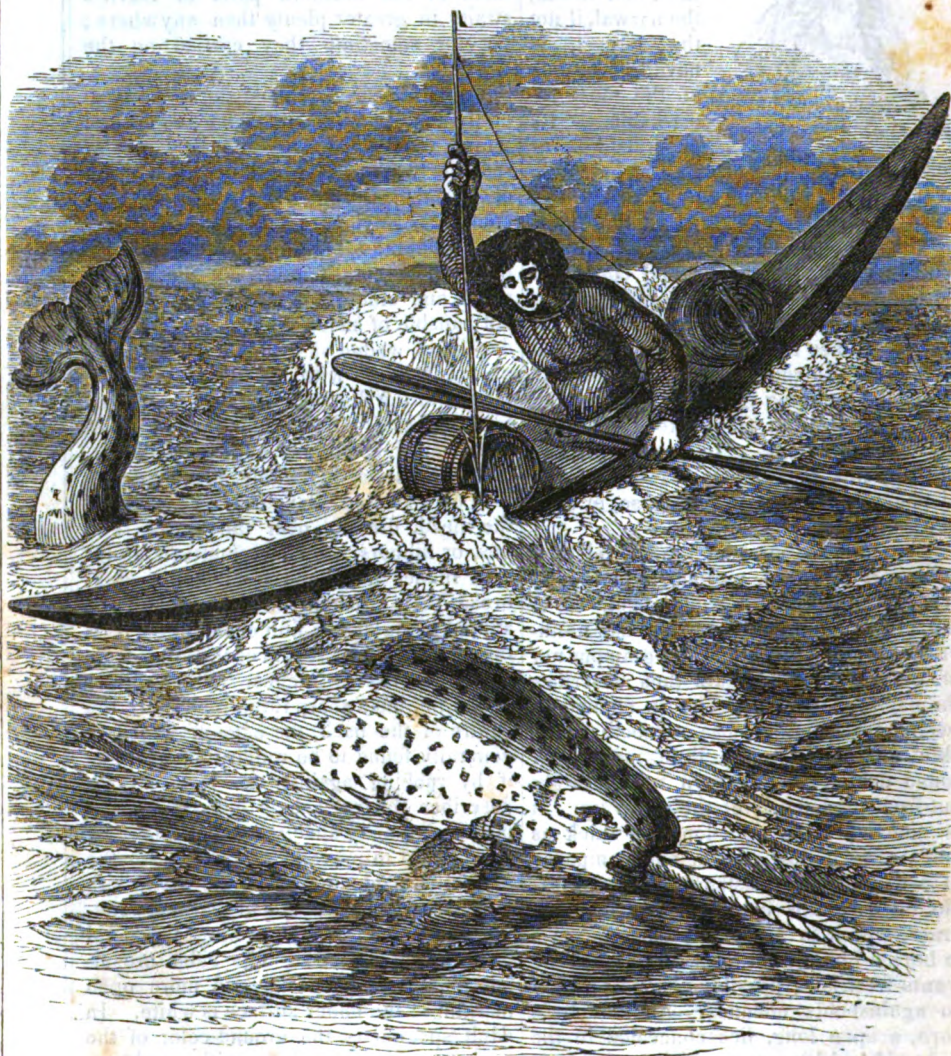
sembles that of the porpoise; it has however no teeth, properly so called, but two tusks, or spears, implanted in the intermaxillary bone, but of which the right remains usually rudimentary and concealed during life. The left tusk, on the contrary, attains to from five to seven or eight and sometimes ten feet in length, and projects from the snout in a right line with the body, tapering gradually to a point, with a spiral twist (rope-like) throughout its whole extent. In structure and growth, this tusk resembles that of the elephant, being hollow at its base, or root, and solid at its extremity.

The tusk or spear of the narwal constitutes a powerful weapon, which it is reported to use with terrible effect. It is however its only weapon, for it has neither the formidable teeth of the grampus nor of the cachalot. Crantz thus describes the narwal: "This species is commonly twenty feet long, and has a smooth black skin, sharp head, and little mouth. A round double-twisted horn runs straight out from the left side of the upper lip. It is commonly ten feet long, as thick as one's arm, hollow inside, and composed of a white solid substance. It is probable he uses this horn to get at the seaweed, which is his proper food, and also to bore a hole in the ice with it when he wants fresh air; possibly also as a weapon against his enemies. Another little horn, a span long, lies concealed in the right side of his nose, which probably is reserved for a fresh supply, if some accident should deprive him of the long one; and they say that as a ship was once sailing at sea it felt a violent shock, as if it had struck upon a rock, and afterward one of these horns was found fastened in it. Formerly these horns, or tusks, were looked upon to be the horns of the fabu-

lous land-unicorn, and therefore they were valued as an inestimable curiosity, and sold excessively dear, till the Greenland fishery was set on foot, when they found them in the northern parts of Davis's straits in greater plenty than anywhere; yet for sometime they carried on the cheat."

Captain Scoresby found the remains of cuttle-fish in the stomachs of several which were opened by him, and similar remains were also found in the stomach of one driven ashore near Boston, Lincolnshire, England.

In general form, the narwal resembles the porpoise, or grampus, but the head is small and blunt; the mouth is small, and not capable of much extension. The under-lip is wedge-shaped. The eyes are placed in a line with the opening of the mouth, at the distance of thirteen or fourteen inches from the snout, and of small size, being about an inch in diameter. The spiracle, or blow-hole, is a single orifice of a semicircular form, on the top of the head, directly over the eyes. The fins, or flippers, are about fourteen or fifteen inches long, and from six to eight broad, their situation on the sides of the animal being at one fifth of its length from the snout. The breadth of the tail is from fifteen to twenty inches. There is no dorsal-fin, but a sharp ridge runs down the centre of the back, the edge of which is generally found to be rough and worn, as if by rubbing against the ice. Crantz describes the narwal as being black; it is only in young specimens that this color can be said to prevail: at an early age the narwal is blackish-gray on the back, with numerous darker spots and markings running into each other, forming a general dusky-black surface. The sides are almost white, with dusky and more open markings; the under surface is white. In adult specimens, the ground-color of the back is yellowish-white, with markings varying from dark gray to dusky-black, and of a roundish or oval figure, with interspaces of white or yellowish-white between them. The skin resembles that of the common Greenland whale (*balæna mysticetus*), but is thinner. The female narwal produces a single young one at a birth, which she nourishes with milk for



Spearing the Narwal.

several months: the teats are situated near the origin of the tail.

The narwal is gregarious, associating in troops of from six or eight to twenty or more; and numbers are often seen clustered together, both in the open sea and in bays and inlets free from the ice, forming a compact phalanx, moving gently and slowly along. Under such circumstances the independent movements of each individual are necessarily embarrassed, so that a considerable slaughter may be easily effected among them. When attacked at such a time, the hind ranks, instead of turning against their assailants, press upon those before, sliding their long weapons over the glossy backs of their leaders, and all becomes disorder and confusion. Opportunities of this kind are welcome to the Greenlanders, to whom the narwal is an important animal.

The origin of the word narwhale, narwhal, or narwal, is said to be from the Teutonic nar, or ner, which signifies a beak or projecting snout; and wal, wale, or whale, an indiscriminate word, in the same great family of languages, for any of the cetacea.

AVARICE.



UT little use is there in trying to settle the question what vice is practised most extensively and productively of most evil. Alas! there are many that thrive so alarmingly, that it is hard to say to which we should

assign in point of strength and mischievous influence the unenviable superiority. There can be no question, however, that "the love of money," which is declared by the highest authority to be "the root of all evil," is sadly prevalent and awfully injurious. Into whatever department of the great social economy we look, we see this mean and hateful passion working banefully. All men, as the author of "Mammon" has well remarked, are bewailing its power and prevalence: "The

legislator complains that governments are getting to be little better than political establishments to furnish facilities for the accumulation of wealth. The philanthropist complains that generous motives are lost sight of in the prevailing desire for gain, so that he who evinces a disposition to disinterested benevolence is either distrusted as a hypocrite or derided as a fool. The moralist complains that 'commerce has kindled in the nation a universal thirst for wealth, and that money receives all the honors which are the proper right of knowledge and virtue.' The candidate for worldly advancement and honor protests against the arrangement which makes promotion a matter of purchase, thus disparaging and discouraging all worth save that of wealth. The poet laments that 'the world is too much for us;' that 'all things are sold;' that everything is made a marketable commodity and 'labelled with its price.' The student of mental and moral philosophy, complains that his favorite sciences are falling into decay, while the physical are engrossing every day more respect and attention; that 'the worship of the beautiful and good is giving place to a calculation of the profitable; that every work which can be made of use to immediate profit, every work which falls in with the desire of acquiring wealth suddenly, is sure of an appropriate circulation;' that we have been led to 'estimate the worth of all pursuits and attainments by their marketable value.'" Yes, Mammon has other assailants beside the divine. Still, however, his votaries, or as we should rather call them, his slaves, are countless; and among these there are not a few who do not so much as suspect that they are held in bondage. He has so many, and these so shrewd and sensible pleas to urge; a decent independence, amplified means of doing good, provision against future contingencies, giving one's children a fair start in life—these and the like are so necessary, so proper, and so becoming, that, were we all father-confessors, we should find, like St. Francis de Sales, that none would come to us to confess the sin of covetousness.

The battle for wealth, is, we believe, one of the sorest and most fatiguing

which mortals fight. The toils of the roughest campaign, the hardships of flood and field, are light in comparison with those of the man who has set his heart not on empires but on gold—whose thoughts and projects by night and by day have all one aim, the acquisition of money. An indomitable perseverance must have fallen to his lot, or his spirit would sink in the struggle. What a round of schemings! what hosts of speculations! what distracting risks! what tear and wear of brain in calculating the chances in his favor! what feverish disquietude! what racking cares! what twinges of conscience, too! There are, it is to be hoped, comparatively few professional misers—few whose every thought and energy are given to money-making—who deny themselves every enjoyment, and hoot at every scheme of benevolence.

These libels on humanity are, we would hope, few indeed. But we have plenty of such characters in miniature. We have men in abundance, who, were they unfortunate enough to live twice or thrice longer than others, would be exhibitions of the miserly passion, quite as pitiable as the Dancers, the Elweses, and such like. The demon has been generated into a multitude of little demons; the burrowing worm has been cut in pieces, but each piece has become a burrower in turn. It has been as with the giant in the fable, whose head was chopped off, but a host grew in its room; or as the dragon-tooth that was buried in the earth, but an army arose as its harvest!

Now these persons do not need to be told to what privations and sickening cares they are subjected. They confound two things, which every well-regulated mind keeps quite distinct—wealth and its uses. They forget that money is an instrument, not an object—a means, not an end—a scaffolding, not a building. They fall in love with the key which opens the palace door; they sit down on the threshold, turn it in their hands, and call it god: poor dupes, they never cross the threshold to gaze on the beauty and magnificence of the interior! They please themselves with the covers on the table without taking their dinner. And even when the disease does not exactly go this length, we know

that the solicitude which attends the getting and the keeping of wealth, is harassing in the extreme. Multiplying, as riches invariably do, a man's relations and movements, they make him in the same ratio a broader mark for the arrows of misfortune. They may remove all anxiety as to temporal evil—hunger, cold, the world's scorn. Yet how many imaginary evils, artificial wants, and false appetites do they create! And how do these increase in strength and number as they are fed! how dependent the most independent people of the world! The cares which attend the acquisition of wealth, the ten thousand means by which he may be deprived of it, keep the money-hunter the victim of incessant disquiet, place his happiness at the mercy of so many contingencies, that we need not startle when told that the "abundance of the rich will not suffer them to sleep." He is like a man living in a castle besieged on every side; not a wind can blow, not a change can be mooted or made without causing him fresh alarm.

Avarice, besides being a troublesome vice, is a very dangerous one. Suppose its victim successful in his pursuit of riches, to what serious perils is he exposed? Among these the fostering of pride is perhaps the most prominent. We are all mutually dependent. But the very rich man, at least if avaricious, is exceedingly apt to forget this. He finds that he has got something into his possession that has a power resembling that of the fabled philosopher's stone. It can turn all it touches into gold. He finds that "money answereth all things;" that it can procure him admission into almost every circle, and make him favorably regarded when in it; that it can convert the rake into a paragon of worth; with marvellous ease blot twenty or thirty years from the calendar of time; smooth the furrowed brow of age, and plant roses on the faded cheek. He finds his wants not merely supplied but anticipated. He finds that every man is ready to serve him; that many (most disinterested persons!) are even willing to let their own business alone to attend to his. Now, it is not in poor human nature to resist this intoxicating influence. A man, or a few men, in an age, may rise superior

to it; but to expect this of mankind generally, or even very extensively, is quite idle. The man will grow proud, and who knows not that pride is fatal to our peace? And worse than all—for there is a close alliance between the two—contempt for his fellow-men may eventually grow into a jealousy of the Divine superiority—all those humbling truths, on the reception of which his eternal welfare depends, he will be prone to spurn. The great Teacher of mankind made few statements stronger or more emphatic than this: "It is easier for a camel to pass through the eye of a needle, than for a rich man to enter into the kingdom of God." There is, indeed, no vice against which the inspired writers caution us in more solemn and startling terms than that which we are denouncing. "Take heed and beware of covetousness," is a warning which the messengers of Heaven again and again reiterate. And the sacred volume teems with examples of the dangers and sad consequences of this vice. "Whether we advert to the losses and sufferings of Lot, the stoning of Achan, the leprosy of Gehazi, or the fate of Judas, the secret of their punishment is explained when the Almighty declares—'For the iniquity of his covetousness was I wroth, and smote him.' And what do we behold in every such infliction but an earnest of its coming doom—the scintillations of that wrath, the flashes of that distant fire, which is kindled already to consume it?"

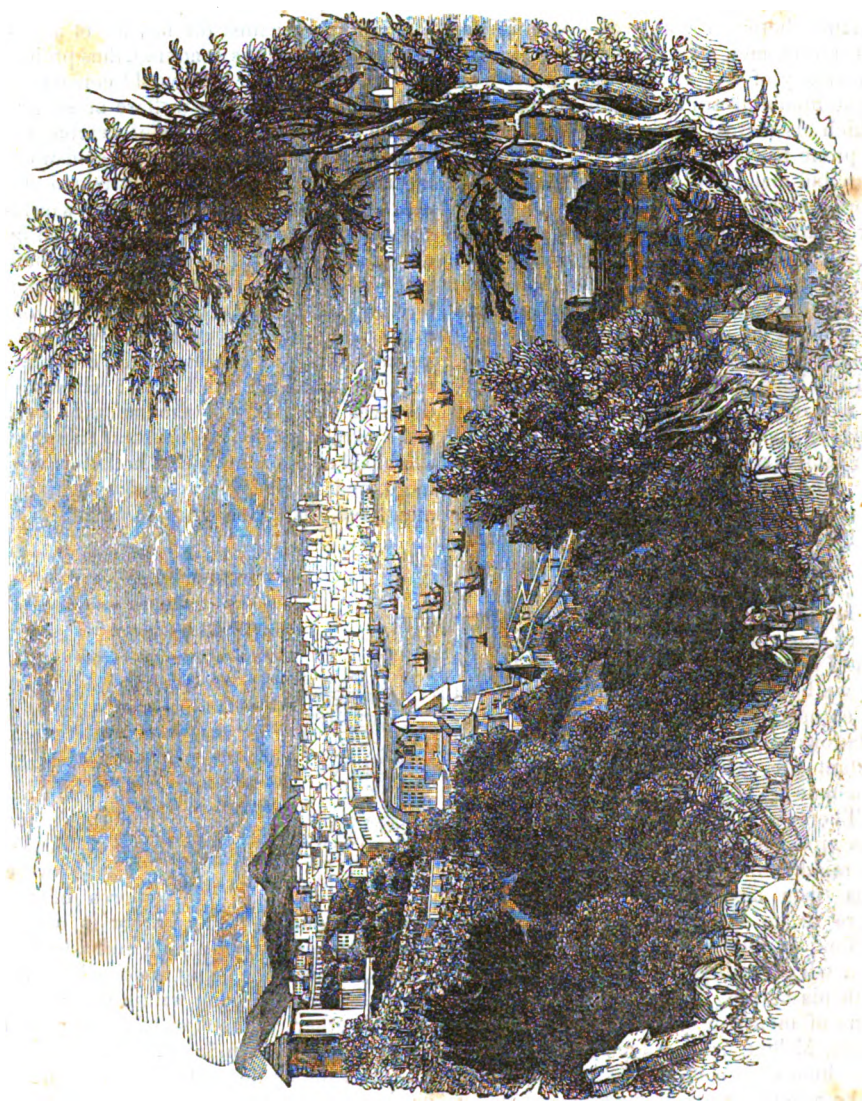
There is a meanness, moreover, about this vice which must strike every thoughtful mind. The Scriptures call the covetous man an idolater. And assuredly there is no meaner idolatry. One can pardon, in certain moods of mind, the man who worships the sun in the heavens with his burning glories, or those incarnations of mental power and energy, Shakspeare, Milton, or Napoleon; but the man who bends his soul at Mammon's shrine looks a being of quite another order—he lacks the poetry of other idolaters. And then, what a train of evils flow from this vice. It poisons the peace of families, it works the ruin of empires. In almost every land it frames and defends laws which equally outrage mercy and justice. It opposes itself to every benevolent en-

terprise. It impedes the progress of truth, and liberty, and love. It dries up the most delicious sympathies that play in the breast of man, and makes him, in a thousand ways, the wronger and oppressor of his fellow. Against the inroads of a vice thus dangerous, thus annoying, thus prolific of evil, every man who would consult his own happiness and the welfare of society should beware. Speaking of avarice, the venerable Howe says: "It is a soul-wasting monster, that is fed and sustained at a dearer rate, and with more costly sacrifices and repasts than can be paralleled by either sacred or other history; that hath made more desolation in the souls of men than was ever made in those towns and cities where idols were served with only human sacrifices, or monstrous creatures satiated only with such food; or where the lives and safety of the majority were to be purchased by the constant tribute of the blood of not a few; that hath devoured more, and preyed more cruelly upon human lives, than Moloch or Minotaur!"

GENOA.



GENOA is situated within a bay in a wide gulf, which extends in a crescent-like form from the shores of France to those of Tuscany. These were the shores of the ancient republic. The harbor is in the same form, and about a mile and a half in length, its entrance being protected by two moles which approach within half a mile of each other. The view of the city from the sea is truly magnificent. Several hills rise from the harbor and form a semicircle, on the declivity of which the city is partly built; and a succession of fine buildings extending two miles, like wings, lines a narrow strip of land between the sea and the adjacent heights. Palaces built of marble and surrounded by gardens, with churches and convents, rise one above the other on the steep sides of the hills be-



City and Harbor of Genoa.

hind, whose summits are crowned with ramparts, forts, and batteries, forming a double line of fortifications, which protects the city on the land side, the exterior line being above eight miles in length. Beyond these hills are the higher Apennines. The streets of Genoa, with few exceptions, are narrow, dark, steep, and crooked, a combination of defects which is not usually found in so large a city; but, like those of Venice, the streets of old Genoa were constructed only for foot-passengers. The Strada Balbi and Strada Nova are spacious streets lined with the marble palaces of the Genoese patricians, some of which contain galleries of paintings, and are otherwise splendid, both by their architecture and interior decorations. Many of the churches are handsome, and the former palace of the Doges, with several other public buildings, are deserving objects of interest.

Genoa and the territory adjoining, divided into seven provinces, is now a duchy forming part of the kingdom of Sardinia. The province of Genoa contains 208,000 inhabitants. The population of the city is 94,000, and the suburbs contain 20,000 more. There are several small maritime towns in the province. The duchy has its own institutions—a high court of justice and a university, and civil employments are filled by Genoese. The garrison is under strict discipline, and much care is taken to conciliate the inhabitants. The liberal spirit of the government is highly praiseworthy when it is recollected that Genoa enjoyed for a long period an independent existence, and that many old prejudices still exist between the Genoese and the Piedmontese, which their forced union, by the treaty of Vienna in 1815, was calculated to keep alive for some time.

The decline of Genoese commerce is to be attributed to internal factions and foreign spoliation, and to those changes which occur in the natural course of events; but it is still very extensive, and has been reviving ever since the peace.

NEVER put off till to-morrow what you can do to day. When angry, count ten before you speak; if very angry, count a hundred.

THE MYSTERIES OF CREATION.



THE power of vitality so wonderfully conspicuous in the vegetable kingdom, which enables a seed to retain its vegetating power though dormant for many years, has a remarkable analogy with the revivification of some of the animalcules. The rotifer redivivus, or wheel animalcule, can live only in water, and is commonly found in that which has remained stagnant for some time in the gutters of houses. But it may be deprived of this fluid, and reduced to perfect dryness, so that all the functions of life shall be completely suspended, yet without the destruction of the vital principle; for this atom of dust, after remaining for years in a dry state, may be revived in a few minutes by being again supplied with water.

Nothing stands alone in this world. "The chain holds on, and where it ends, unknown." How strongly is this felt even in the vegetable creation! Who does not perceive it while looking on the principal constituents of plants, i. e., carbon, oxygen, hydrogen and nitrogen, and contemplating their gradual transformation into vegetable albumen, and vegetable caseine, or on any of the elementary forms of the nitrogenized compounds, so absolutely essential, directly or indirectly, to animal life. And even should it also occur to the mind, that the same process ceases not with us, but that these human bodies, thus marvellously made and nourished, are, even the organs by which the high functions of the brain are performed, material and perishable, and that "we feed ourselves to feed the worms," and, being dust, return literally to that dust again; let us not pause on the threshold of the argument, where despondency might await us, but go beyond on through the portal, and calmly consider what deduction we may draw, by the simple light of reason, from this undeniable truth. We see that everything around us here, when it has accomplished the end of its being, is not annihilated, but only transformed into some other state, in which it still continues to work out the

will of Him who created it: every material thing perfectly fulfils its destined purpose; but man has that within which assures him that he neither is nor does all that the soul could be and perform were it disencumbered of the body in its grosser state. Has he not, then, the strongest reason to confide to Him who gave that body for good purposes here, that He will, at its dissolution, still make it subservient to his wise intentions, and after he separates it from its present union with the soul, will assuredly place his rational creature in a condition to be and to do all for which that creature was made? Man would then no longer be the exception to the rest of sentient beings, their wishes and desires are so arranged, that the means of their gratification are within their reach on earth; we, on the contrary, feel aspirations which never can be fully gratified here, and whose very existence foreshows a time when they will have their fruition. The moral consequence we may draw from this is almost too obvious to require notice. If we look forward to a state in which the body shall be changed that its present enjoyments can exist no more, while those of the soul shall last for ever, how important is it that the will, which triumphs over everything that is material in us, should be so regulated, that when that state arrives, it may not long for those earthly pleasures which are gone to return no more, but may have already anticipated in hope the reality it shall then experience. The wise of old, though but dimly perceiving what is assured to us under the pledge and seal of God himself, could yet draw the right inference from those dim perceptions. When in the varied phases of the butterfly's frail life they saw prefigured their own future destiny, they could urge their disciples to purify the soul, and fit it for companionship with eternal love. In the grain of wheat apparently perishing in the earth, but springing up in due season in a form "the same, and yet another," the apostle found a similar correspondence with our lot; all can see the appropriateness and beauty of the comparison, and all having this hope, may they continue "steadfast and immovable" in all that is good, knowing that their labor shall not be in vain.

ANECDOTES OF WASHINGTON AND MORRIS.



AMONG the interesting anecdotes related to us most graphically and feelingly, of Washington, by Mr. Custis, when in New York city lately,

was one on the landing of the general at Whitehall, when he was about to be sworn as president of the United States. As the general was stepping on shore from the vessel, he was addressed by an American officer with, "Sir, I have the honor to command a guard of soldiers to escort you to your residence, and also on any other occasion you may desire." "A guard!—a guard for me!" exclaimed Washington, rising in his stature, and quite overlooking the guard of some fifty soldiers, "why, sir, I need no guard. I ask for no other guard than the affections of my countrymen!" Whereupon, with a significant wave of his hand, his guard fell into the rear. Mr. Custis says this anecdote was frequently related, among others, by John Carroll, who was then with the general, and heard the remark of Washington, tending to show that he was a great and good man, and one worthy the affections of the people; this alone would satisfy him, as it should all others, of the fact.

Another anecdote related to us by Mr. Custis was this: When Washington had marched his army as far as Elk river, on his way to Yorktown, Virginia, to attack Lord Cornwallis, the soldiers, then long without their pay and greatly fatigued, requested their arrearages, and as paper money was of little value to them, they desired it in silver. This was an alarming difficulty with Washington at this crisis, for he knew full well that his soldiers should have their pay, and yet he was extremely anxious to reach Yorktown with his troops as soon as possible, lest Lord Cornwallis should escape with his forces, which Washington had so confidently hoped to capture. In this dilemma he immediately called to him Robert Mor-

ria, to whom he related in confidence and with much feeling the particulars of the case, and the probable effects, should it be found impossible to raise the money. Mr. Morris, who as it is well known, was a financier, as well as true patriot and honest man, saw at once the difficulty and its probable consequences, and, bethinking himself for a moment, he said, "Ah, I have it, general, I'll obtain the money."

The French fleet lay far below in the bay, yet thither Mr. Morris immediately pursued his way. Addressing himself to the count under whose command the fleet was, he represented that anticipated funds from the government for the payment of the troops not having arrived in season, it became necessary to pay them before reaching the battle-ground, where success was certain for the combined French and American forces; therefore, he would take the liberty of asking him—as a tried friend of the cause of freedom—for an accommodation for the present; and that he himself would be responsible for the amount if required, &c. This was done with so much address, and at the same time with so much truth and confidence, that it produced the desired effect.

The count readily and very politely proffered the requisite sum of silver; and proceeding himself to his iron chest, took it out in crowns done up in parcels, and delivered it to Mr. Morris, who, thereupon, proceeded with a light heart to the American camp, and to the no less joy of Washington and his brave but suffering army. The army, it is well known, proved successful, and perhaps, this circumstance contributed in a great measure to this result.

There were two or three anecdotes of Robert Morris, told by Mr. Custis, which showed that he was one of the most important men, if not next to Washington himself, in the happy results of the revolution, and Washington ever esteemed him as such. In this connexion, Mr. Custis related most touchingly the visit of Washington to the jail in Walnut street, Philadelphia (where Mr. Morris was afterward confined for debt!) on his arrival in that city. The interview was indescribably affecting, and so also was a visit subsequently paid by Mr. Custis to

Mr. Morris, when Mr. M. was near his death. But what rendered these last anecdotes more interesting on this occasion, was the fact that they were addressed to a group of gentlemen, one of whom, was the venerable son of Robert Morris.

THE MIRAGE.



F the many extraordinary appearances exhibited occasionally by unusual occurrences in nature, few have been observed with more astonishment

than the phenomenon designated by the French "Mirage." This is an appearance often presented to the traveller in places where there is a large extent of arid country acted upon in a powerful manner by an almost vertical sun, in which the earth puts on the appearance of an extended lake or river, although no water is in reality to be found near the spot.

It is in Egypt that this phenomenon is most frequently observed. The uniformity of the extensive sandy plains of lower Egypt is interrupted only by small eminences, on which the villages are situated in order to escape the inundations of the Nile. In the morning and the evening objects appear in their natural form and position; but when the surface of the sandy ground is heated by the sun, the land seems terminated at a certain distance by a general inundation. The villages which are beyond it appear like so many islands situated in the middle of a great lake, and under each village an inverted image of it is occasionally seen. As the observer approaches the limits of the apparent inundation, the imaginary lake which seemed to encircle the village withdraws itself, and the same illusion is reproduced by another village more remote.

It is not, however, only in the African deserts that this appearance has been witnessed: many other parts of the world, where there are large tracts of flat land, often exhibit the same phenomenon.



Mirage in the Plains of Mexico.

Baron Humboldt describes several instances witnessed by him during his travels in South America, especially in the barren steppes of the Caraccas, and on the sandy plains bordering the Orinoco. Little hills and chains of hills appeared suspended in the air, when seen from the steppes at three or four leagues distance; palm-trees standing single in the Llanos appeared to be cut off at bottom, as if a stratum of air separated them from the ground; and, as in the African desert, plains destitute of vegetation appeared to be rivers or lakes.

The view accompanying this article represents a case of mirage witnessed in the plains of Mexico.

However supernatural these phenomena appear, they have been satisfactorily accounted for by natural causes. It is only, however, within the last forty years that an explanation was attempted.

Monge, the French philosopher, and Mr. Huddart in England, were among the first to explain the principle of the mirage, and they both referred it to an unusual refraction of the atmosphere caused by different densities of the strata of air consequent on the heat of the ground.

The lower portion of the atmosphere being warmed by receiving heat from the earth, it becomes less dense than the strata of air above; but as this must receive a certain portion of heat from the lower strata, the air will be gradually denser as the distance from the earth is increased; so that an aerial prism will be formed, through which, as in a common glass prism, distant objects will be seen reversed.

M. Biot adopted the same idea, and explained the circumstances on which he founded his opinion, at great length in a memoir presented to the French Institute; and Dr. Wollaston proved the truth of the theory by a very ingenious experiment, by which the appearances presented by the mirage were accurately imitated. He procured a square glass bottle, a third of which he filled with clear syrup; to this he added some distilled water, and filled up the remaining third of the vessel with rectified spirits of wine. The different specific gravities of these fluids did not permit them to mix with each other, ex-

cept in a slight degree at the points of contact. This produced slightly different densities in those portions of the contents of the vessel, being in fact similar to glass prisms, and on looking through the mixture at an object placed at a slight distance behind, a reversed image of the object became apparent.

Dr. Brewster adopted a better plan to render the true effect apparent. He says: "Although the experimental method of illustrating this phenomena of unusual refraction, as given by Dr. Wollaston, is in every respect an excellent one, yet the employment of different fluids does not represent the case as it actually exists in nature." The method employed by Dr. Brewster, consists in holding a heated iron above a mass of water bounded by parallel plates of glass. As the heat descends through the fluid, it produces a regular variation of density, which gradually increases from the surface to the bottom. If the heated iron be now withdrawn, and a cold body substituted in its place, or the air allowed even to act alone, the superficial strata of water will give out their heat, so as to have an increase of density from the surface to a certain depth below it. Through the medium thus constituted all the phenomena of unusual refraction may be seen in the most beautiful manner, the variations being produced by heat alone.

An appearance similar to the mirage, and produced by similar means, may be observed on looking along the surface of the boiler of a steam-engine; or if we even heat a poker, and look along its edge at an object placed at a little distance, it will be observed inverted in the air at about a quarter of an inch from the poker, the surrounding objects appearing to be floating in water.

THOSE WHO NEVER COMPLAIN.

LIFE is nothing without a touch of the pathetic; a joke is very well in its way, and as man is the only animal that laughs, he ought to indulge himself now and then in this his peculiar faculty and privilege—

but we can not be always laughing. Besides, it shows a want of dignity to be everlastingly on the broad grin, the titter, the giggle, or the chuckle. We owe it to ourselves to look solemn, and to wear a serious countenance occasionally—or, if we are particularly fond of dignity, we may always have a solemn look. There is something more interesting in crying than in laughing, and it would be impertinent to ask what they are laughing at, but if you saw as many crying, your sympathy would lead you to ask what they were crying for. If, on inquiry, it should be found that their tears were flowing from an inadequate or unworthy cause, you would feel that the dignity of grief was much abated. What then? Why then, if there be a want of dignity in giving way to the expression of grief when the cause is trivial, there must be great dignity in not grieving when there is an abundant cause of grief—hence the pleasure they have in letting all the world know that they never complain, and in talking of their exemplary patience and unparalleled fortitude, in bearing such a burden of woe without a word of complaint.

CAUSES OF THE FRENCH REVOLUTION.



LONG before the advent of the revolution, the condition of France had to discriminating observers, indicated the approach of the impending storm. The monarchy was worn out, the nobility corrupt, and the clergy degenerate. A thousand years had almost elapsed since the establishment of the former under Clovis, and the system was thus hastening to that state of decay which seems inseparable from all human institutions. The vices of one king, and the virtues of another, had alike contributed to produce this result. The long and expensive wars of Louis XIV. and the

profligacy of Louis XV. had exhausted the resources of the kingdom, and alienated the affections of the inhabitants; and the quiet, unobtrusive, undecided character of Louis XVI. was calculated rather to encourage than to suppress the rising flame. This unhappy monarch, if endowed with few qualities which attract our admiration, was possessed of many which engage our esteem; and had he lived in an earlier era, he would have been considered the beau ideal of that patriarchal system on which the government was supposed to be founded; but on the stormy era when he ascended the throne, his virtues tended only to excite the political tempest which swept him and his family from the earth.

The number, the frivolity, and the viciousness of the nobles had increased to a surprising degree; and it was mainly these that gave rise to the revolution. According to Madame de Staël, there were nearly one hundred thousand of them; as not only was the head of a family noble, but likewise all his descendants; and titles of nobility were besides obtained from numberless offices, or were openly purchased by money. The nobles possessed many privileges—they contributed nothing to the support of the state, and they enjoyed a monopoly of all its higher offices. They alone could hold commissions in the army or navy, and fill the more important and lucrative posts of civil government; and to such an extent had their influence attained, that, in the very year before the revolution broke out, they had caused the feeble king to pass a decree that none but those noble for four generations should hold a military commission; while they, at the same time, declared themselves exempt from contributing in any way to the expenses of the state: and yet, at the moment when they assumed such privileges, they were themselves the very slaves of the court. A post, a pension, or some frivolous honor, was at any time sufficient to gain the best of them. A few, indeed, stood aloof, and were apparently exempt from this universal degeneracy; but it was either because, like the duke of Orleans, they had been disappointed at court; or, as in the instance of the smaller noblesse in La Vendée, be-

cause their private fortunes were unfit to cope with the costly dissipation of the metropolis. And yet these alone stood by the monarchy in the hour of danger; those who now fluttered around the throne, flying on the first approach of alarm, when, in its defence, they might have been expected to die like men. A few only of all their number were free from this general character, and it must be admitted of these that they showed a spirit worthy of a better fate if not a better cause.

The clergy were also a numerous body, and their conduct, as a class, had tended greatly to demoralize the country.

They were upward of 80,000 in number, and consisted of two classes—one formed of the branches of the nobility, designed for the higher offices of the church, and comparative idleness; the other, comprehending the plebeian portion, destined to labor and indigence. Many of the former of these were men of the highest talent, and celebrated in Europe as statesmen; but others had no higher claim than to the rank of wits—which, however, in the French court of that period, was of no influential order, as Chateaubriand, one of the staunchest supporters of the ancient dynasty, mentions, in his "Historical Studies," that a bon-mot was then considered of more importance than an oration or victory. And though most of the poorer order were virtuous men, they were generally uneducated, bigoted, and swayed by the populace, to whom they owed their support. Like the nobles, the clergy contributed nothing to the maintenance of the state, except the benefit of their prayers, which they were forced to give by statute; but the writings of Voltaire and his associates had effected such a change in the once "most Christian" country, as its rulers had long been termed by the pope, that this only provoked derision. It was said to be a provision proper enough, but one that brought no relief to the exhausted treasury. The poorer clergy, however, were unable, and the superior unwilling, until it was too late, to grant any other. Hence the whole property of the church was, shortly after the revolution broke out, confiscated at a blow, and the higher clergy fled the country, while the humbler, for the most part,

ranged themselves on the side of the revolutionists.

The people were in a state of abject slavery. All the ancient feudal usages which improved or alleviated their condition, had either been removed by violence or impaired by time. Only a third of the land belonged to them, and from this, besides supporting themselves, they were constrained to sustain the state, and uphold the church and nobles. They alone contributed to the expenditure of the state, and, besides maintaining it, they had to pay heavy dues to the nobles, and tithes to the clergy. Yet they possessed not the slightest privilege. If they entered the army or navy, they could never obtain commissions; if they devoted themselves to the civil service of the country, they could never rise above the humblest rank; if they engaged in commercial pursuits, they were fettered by restrictions; and if they devoted themselves to agriculture, their fields were ravaged by the game-privileges of the nobles. An English traveller, Arthur Young, who travelled through France a short time before the revolution, represented them as ground to the earth; and fifty years previously, the celebrated Earl of Chesterfield had declared that all the germs of revolution were then to be found in the country. But the government itself appeared wholly unconscious of danger; and under the auspices of the beautiful and high-minded but unfortunate Marie Antoinette, when on the verge of destruction, basked as if in the meridian of fortune. In proportion as the country grew poorer, its rulers increased in extravagance. "Profusion was substituted for parsimony," says Mr. Alison, "in the hope of circulating money; and prodigality for economy, in the expectation of allaying discontent." But this profusion was extended only to the courtiers, and their immediate adherents alone reaped the benefit of it, while it was withdrawn from the nation at large; and this at a time when the people were oppressed by such restrictions that they could embark in few trades without a license from government, or procure even law without openly purchasing justice; for before the revolution, the chief judicial offices were either hereditary or sold to

the highest bidder, who had thus no alternative but to make a trade of justice by retailing it in turn.

While affairs were in this state, the American revolution broke out, and gave an impulse to the opinions of the French encyclopædists which it was found impossible to repress. "In an hour," says Burke, "more unfortunate for himself than for a neighboring monarch, Louis XVI. was induced, by his cabinet, to send assistance to the revolted colonies of England, and by thus attempting to diminish the value of another's crown, he lost his own." He discovered this with regret, when regret was unavailing; and the measures he adopted to check the popular enthusiasm, when Lafayette and his associates returned to France from their successful assistance of the Americans, by increasing the severity of the restraints under which the people then labored, only accelerated the march of opinion which he was anxious to arrest. Even then his conduct was marked by that vacillation and inconsistency which characterized all the acts of this ill-fated monarch; for, in the very hour when he was receiving Franklin with the highest honors, as the representative of the American people, he launched the edict already mentioned against popular expectations at home; and his courtiers were encouraged to sing the praises of liberty in other countries; while not a vestige of it existed in their own. "The court," says a cotemporary writer, "freely indulged those sallies without for a moment anticipating their possible application, or surmising that what they admired for Philadelphia, could ever be desired in Paris."

But while all these causes influenced, it was the want of money to provide for the national expenditure that was the immediate forerunner of the French revolution. The country was exhausted alike by the victories of one war and the reverses of another, the magnificent projects of Louis XIV., and the costly profligacy of the fifteenth prince of that name. Nor was the expenditure diminished during the reign of Louis XVI., though the conduct of that prince was pacific, and his character comparatively pure. He had himself sent his plate to the mint, and the

queen was supposed to have pawned her diamonds, in order to provide for the expenses of the government. But still there was a deficiency of eight millions sterling in the revenue, and while the people groaned under imposts, the state staggered under debt. One minister after another was brought in to relieve these embarrassments, but each of them failed, and one of them, Neckar, to whom the revolution has, by Napoleon, been imputed, but apparently on unreasonable grounds, published, on his dismissal from office, a famous account, named the "compte rendu," which disclosed those appalling deficiencies, and increased the general dissatisfaction that prevailed. Under these circumstances, the chief minister, Calonne, an able, though specious, plausible, and once profligate, but now patriotic man, convoked an assembly called the notables, consisting of the leading persons in the kingdom, and proposed that the privileged orders should tax themselves; but the nobles and higher clergy resisted the innovation: and when he attempted to levy a new impost, they declared that this could be done only by the authority of the states-general—a body representing all classes of the kingdom, and unheard of for almost a century before. The word states-general was no sooner pronounced, than it was reiterated by every order in the community, and all, excepting the government, concurred in desiring its convocation from which they expected relief. The court, dreading such an assemblage, attempted to supersede it, by proposing what was termed a "cour plénière," or meeting of the leading nobles and clergy, with a few of the higher merchants, instead. The privileged orders resisted, and when a troop of dragoons were sent to arrest D'Espremenil, one of their number who had made himself obnoxious to the government, they declared they "were all D'Espremenils." A struggle ensued, but the court was, in the end, obliged to submit, and, on the proposal of the nobles, a decree was issued for the convocation of the states-general, which was to sweep both nobles and court from the land.

So long an interval had elapsed since the meeting of this body, that few were aware of its functions, or even of the form

which it ought to assume. It had not assembled since the year 1614; and the court party maintained that its sole duty was to grant taxes; but the populace and many of the nobles asseverated that it was also to inquire into grievances. On the subject of its formation they were equally discordant. The clergy and nobles asserted that it should consist of two bodies to represent *them*, and one on the popular side—each equal in number, and sitting in different chambers; but the court, piqued by the opposition it had experienced from the two former parties, and desirous to conciliate the latter, decided that the third estate, or plebeian portion, should equal in number the other two united; and Neckar, the well-meaning but incompetent Genevese banker, who had again succeeded, as prime minister, the obnoxious Calonne, temporarily disposed of the question of separate chambers, by leaving it undecided. This was a fatal error; for, shortly after the meeting of the states-general, the popular party refused to proceed to business except along with the clergy and nobles; and a few of these going over to the plebeian side, the whole were soon constrained to follow, where they were, of course, out-voted by the third estate, which consisted of a moiety before, and was now, by these desertions, converted into a majority. It is for this, and the neglect to provide for separate chambers, that Neckar has been arraigned by Napoleon as the cause of the revolution; but his opinion was probably influenced by his antipathy to Madame de Staël, that minister's celebrated daughter.

"Such," says a recent writer on the subject, "was the state of France in 1789, when that star of revolution arose which was destined to blaze so long on her horizon, purifying her political atmosphere, but blighting almost all on whom it shone—destroying her ancient monarchy, and one of the most amiable princes that ever sat upon her throne." A terrible elemental convulsion seemed to forbode the tempest that followed. In the midsummer of 1788, a fierce hurricane and hail-storm arose, which swept the harvest from the fields, destroyed the vintage on the ground, laid whole provinces in ruin, and committed such devastation that the terror-struck in-

habitants believed it the forerunner of the destruction of the world. "But they had yet to learn," says the author already quoted, "that terrible as this convulsion of nature was, it proved infinitely less destructive than that which was about to arise among men."

The state of Europe, too, at this period, favored the approaching strife. The whole continent was plunged in a state of listlessness or degradation. Britain alone preserved any vestige of freedom. From Holland, liberty had been expelled; and it scarcely found a shelter in Switzerland—the only other part of modern Europe in which it had ever taken root. Italy was engulfed in slavery; and Germany, though it possessed the rudiments of free institutions, was in a state of equal political nonentity. Spain and Portugal were sunk in slavish superstition; and in Russia the very name of freedom was unknown. On all sides there was an apathy, indicating that the old system of governments was worn out; and men were either disposed to favor, or unable to resist, the new opinions to which the American revolution had given birth.

GLENGARIFF.



GLENGARIFF, or "the rough glen" is a very romantic spot on the southern coast of Ireland. Most travellers who have been attracted to the lakes of Killarney by their natural beauties, and the legendary tales connected with them, have wandered thence to the scarcely less famed and perhaps more beautiful scenes around Glengariff. The entrance to the little bay of Glengariff is protected by a small island, on which has been erected a martello tower, crowning the prospect with one of the most picturesque objects in landscape-scenery. The bay is surrounded by hills clad in the richest verdure, here bending by a gradual declination toward the sea,



Bay of Glengariff, Ireland.

and there rising from the waters with the most high and majestic appearance. The brightest hues of nature are reflected in the still bosom of the deep—the yew, the holly, and the arbutus, giving a peculiarly graceful appearance to the nearer hills; the various colored heaths brighten up the middle distance; and in the extreme verge of the prospect the huge forms of the higher mountains, but faintly seen, appear like spirits rising into the clouds. All tourists speak in raptures of Glengariff and the surrounding scenery. The climate of this part of Ireland is extremely mild and healthy, the most tender plants surviving throughout the winter, even in the open air. Like most beautiful or romantic parts of Ireland, Glengariff boasts its fairy legend. In one part of the small but delightful bay of Glengariff, the sea being protected from the wind by a projecting point of land, there is a constant calm; and other peculiarities of this spot have rendered it the object of one of the fairy superstitions of the south of Ireland. It is called the Bog of Glengariff Bay.

MEMORY.



It has often struck us, that, in our modern educational improvements, one point of very considerable importance is apt to be lost sight of, or at least to be treated without that degree of attention which it merits.

We condemn, and justly, the parrot-like fashion in which the young were made to go through their school-tasks in days past, learning by rote and by heart lessons, of the signification and value of which they were left in almost total ignorance. But, in changing the system, and making the meaning the primary matter in every lesson taught, there is some risk, it seems to us, of our running into error in an opposite direction, and overlooking one real advantage, which most certainly attaches so far to our old academical customs. We refer, it will be obvious, to the exercise and cultivation of

the memory. *Memoria augetur exercendo* (the memory is strengthened by exercise) is an adage of equal antiquity and truth; and the committing of things to memory, even before a comprehension of their meaning is attained, may be of no slight service to the young, inasmuch as the adage in question is thus fulfilled. Even the long *propria que maribus* rules of Rudiman's grammar, which used to be consigned to memory, we remember, by boys who had not the faintest idea of their meaning, may not have been unserviceable in their way, simply from the powers of recollection being thereby called forcibly into play. But there is no occasion for the object on which the memory is exercised being something unintelligible. Far from it. It would be easy, in communicating rational instruction to the young, and exercising their minds upon comprehensible lessons, to accompany such tutorage with the culture of the memory; and this course, we argue, would be a judicious and most useful one. In fact, the culture of the memory seems to us a matter of such high consequence, as to merit being ranked as a distinct item in every syllabus of juvenile instruction. It is a secondary point, certainly, to the conveyance of actual knowledge, but still most important, though it be subsidiary.

Those who have not particularly attended to the subject would probably be surprised, on inquiry, to find to what an extent mere strength of memory appears to have contributed to the greatness of literary men in all ages. Our own times have presented at least two striking cases in proof of this assertion. Speaking of Lord Byron, Mrs. Shelley, an observer of great acuteness, and who had the advantage of ample opportunities of intercourse with that noble poet, has made the remark that his natural abilities did not strike her as very extraordinary; in truth, she rather thought meanly of them; but "his *memory*," she says, "was altogether *supernatural*." Every page of his writings supports this statement. In the first place, as regards the simple remembrance of words, the endowment in question appears to have been of vast use to Byron. To the great strength of his memory, we may ascribe the astonishing copiousness and

felicity of language, and the facility of rhyming, displayed in the brilliant galaxy of poems which he poured forth in rapid succession—a succession so rapid, indeed, as to have no parallel in literary history. Again, when his poems are fully examined, we find in them comparatively few traces of distinct originality of thought. A vast number of his ideas and images are but able and improved versions of the conceptions of others, for which he had drawn upon the stores of his “supernatural memory.” His skill in this mode of adopting and transplanting is seen to a remarkable extent in his tragedy of *Werner*; but the same thing might be shown in a thousand places in his works, where he has not acknowledged any obligation, as he did in the particular case mentioned. An example of his talent at adopting thoughts with emendations is seen in the fine passage:—

“And the waves bound beneath me like a steed
That knows its rider.”

“Here,” says Moore, “the poet has evidently caught an image in Beaumont and Fletcher, and, by a change, greatly improved it:—

‘No more shall we two feel our fiery horses
Like proud seas under us.’”

The illustrations which Byron gave, in his juvenile satire, of the faults and follies of “English Bards,” were almost all directly borrowed from the other objects of his attack, “Scotch Reviewers.” In short, everything tends to prove that much of Lord Byron’s success in literature rested on his “supernatural memory.” And if we turn to his school-days, we shall find distinctly the origin of his endowment in this respect. He tells us, that if he shone in anything it was in public recitation or declamation. He probably little thought that the getting up of pieces by heart to display his boyish elocution, was to bear so materially on his after-greatness. The case is an instructive one.

Not less strikingly apparent was the value of a well-cultivated memory in the case of Sir Walter Scott. That he possessed such a gift is undeniable. The *Eurick* Shepherd tells us that being once on the Tweed with him, engaged in salmon fishing by night, Sir Walter requested the Shepherd to amuse a leisure moment

by repeating a certain ballad. The ballad was of some length, and had never been printed; and Hogg could not remember more than the first verse or two. To his great surprise, Scott, though the piece had been but *once* repeated to him, commenced and went over it, word for word, from beginning to end. Admitting that this story may be a little exaggerated by the worthy Shepherd, there can be no doubt that it is so far true as to afford a good instance in proof of Sir Walter’s wonderful memory. The surpassing usefulness of the endowment to him need scarcely be pointed out. It would and did save him much of the trouble of invention, as well as of research and references, in concocting his exquisite narratives. In the similar compositions of other novelists, we can always discern annoying marks of their having “read up” for their tasks. Digested long in his extraordinary memory, the information of Sir Walter comes out as naturally and easily as if he had been actually a familiarized denizen of the various places and times he describes. To his memory, too, is to be ascribed that marvellous felicity of illustration which constitutes so large a portion of the charm of his works. Whatever subject engaged his pen, he could abundantly enliven and illustrate it with anecdote or saying, humorous or pathetic, as the case might require, but always appropriate. From the stores of his reading being more recondite, and also from the fact of his having obtained many of his countless good things from oral converse with the world, the extent to which Scott drew, through his memory, on the brains of others, is neither so great, nor, as far as it goes, so discernible, as in the case of Byron.

While thus endeavoring to enforce the propriety of cultivating the memory, by the examples of such men as Byron and Scott, it must not be thought that we are blind to the share which the natural talents of the individuals had in causing their success, and elevating them to greatness and renown. Our object chiefly is to impress on the minds of our readers a sense of the value of a powerful memory, as an auxiliary endowment; though at the same time, beyond all question, a strong and well-stored memory has often gone

far to make up for the want of original powers of mind, and has enabled those possessed of it to outshine others who possessed originality of mind without the accompanying advantage of strength of memory. Hitherto, the case of literary men only has been referred to; but the same arguments apply to all positions which men can occupy, where combination or calculation are matters of frequent concernment, and, in short, to all situations where the records of experience are available or influential. Though of more consequence in some circumstances than in others, a powerful memory is indeed a possession of paramount importance to all mankind.

The natural mode of cultivating and strengthening the memory, is, as the old adage says, by *exercise*; and wonderful, indeed, is the extent to which its powers may be thus carried. Perhaps Scott owed his great memory in part to the numerous attempts which he must have made while collecting ballads in his youth, to bear such pieces off by heart, when his time and other circumstances did not permit of immediate transcription. Other noted men, however, have even far excelled him in respect of the same endowment. Magliabechi, the famous Florentine, had acquired great command of memory. He was librarian to the grand duke of Tuscany, Cosmo III., and, in this situation, became what his friends called a universal index. It was common for the learned to consult him when they were writing upon any subject, and he could tell them not only what previous authors had directly treated of the same matters, but could also point to such as had briefly and incidentally alluded to them, naming the author, the book, the words, and often the very page at which each passage occurred. Magliabechi's memory was once put to a severe trial. A friend gave him a manuscript composition to read, and after a time received it again. Shortly afterward, the individual came to Magliabechi, lamenting the loss of the manuscript, and entreating him to put down as much of it as he could remember, that it might be re-written. The other consented, and, sitting down, wrote over the production, word for word, from

beginning to end. This marvellous power of recollection arose chiefly from his situation of public librarian, calling for the constant exercise of the faculty.

La Motte, the French dramatist, on hearing a play once read, could repeat any given scene of it, word for word. Cicero mentions one Carneades, a Greek, who had cultivated his memory to such an extent, that ultimately he was able to repeat by heart the contents of most of the books in a whole library, as if he read from the pages of the books themselves. Mithridates, a powerful sovereign of Asia Minor, who had under his rule twenty-two nations or tribes, all of them speaking either distinct languages or dialects of languages, found it necessary to attempt the acquisition of all these tongues, and by a strong exertion of memory mastered them so far as to be able to converse with fluency in each. The famous Bishop Jewel, disliking the practice of reading sermons, accustomed himself, early in life, to get his discourses by heart, and brought his memory in the end to a wonderful degree of perfection. His powers in this respect were often tested by his friends. If forty or fifty words, picked at random from languages alike barbarous and unknown to him, were once read over, he could, after a little reflection, repeat them either backward or forward, as he might be desired. The celebrated scholar, Sealizer, was even more distinguished for strength of memory than Bishop Jewel, or any of the individuals here mentioned.

It would be an easy matter to multiply examples where the cultivation of the memory has strengthened its powers to an astonishing degree. Samuel Johnson is a case in point. The force of the faculty in him, in his latter days, was doubtless owing to its culture during the composition of his dictionary, and it gave him much of his brilliant conversational readiness. It is, however, unnecessary to carry this argument further. Every reader who has perused the narratives of persons long held in captivity, will remember that, in almost all instances, one of the mental phenomena recorded by each prisoner was a great increase of the powers of memory, resulting from the necessity of exercising and depending on the faculty, in the ab-

sence of all the aids to be found in ordinary circumstances. A series of notches in a stick, or knots on a string, conveyed often to the poor captive a whole history. Such cases would alone prove the value of exercise to the memory. If, then, strength of memory be a possession of such consequence as we have endeavored to show it to be, at the risk, perhaps, of being held to press on the attention a self-evident fact; and if the plain and obvious mode of strengthening the memory is by exercising it, should not this end be kept prominently in view in the education of the young? To us, as has already been observed, the culture of the memory seems a matter of so much moment, as to merit being ranked as a distinct item in the programme of juvenile education.

Remarkable displays of strength of memory have occasionally been made in public by individuals professing to follow a peculiar and secret mode of fixing facts on their recollection. One young boy, who lately exhibited in public in this country, gave answers to a list of questions, amounting to many thousands, and some of them involving long sums of figures. A long list of figures, set down at random, was also repeated by him backward, without error, after being looked at for a few seconds. Whatever was the mode of doing this, it was obvious that much of the boy's power of memory arose from exercise—exercise, it may be, with a help, but still exercise. Such cases only tend to bear out what has already been said.

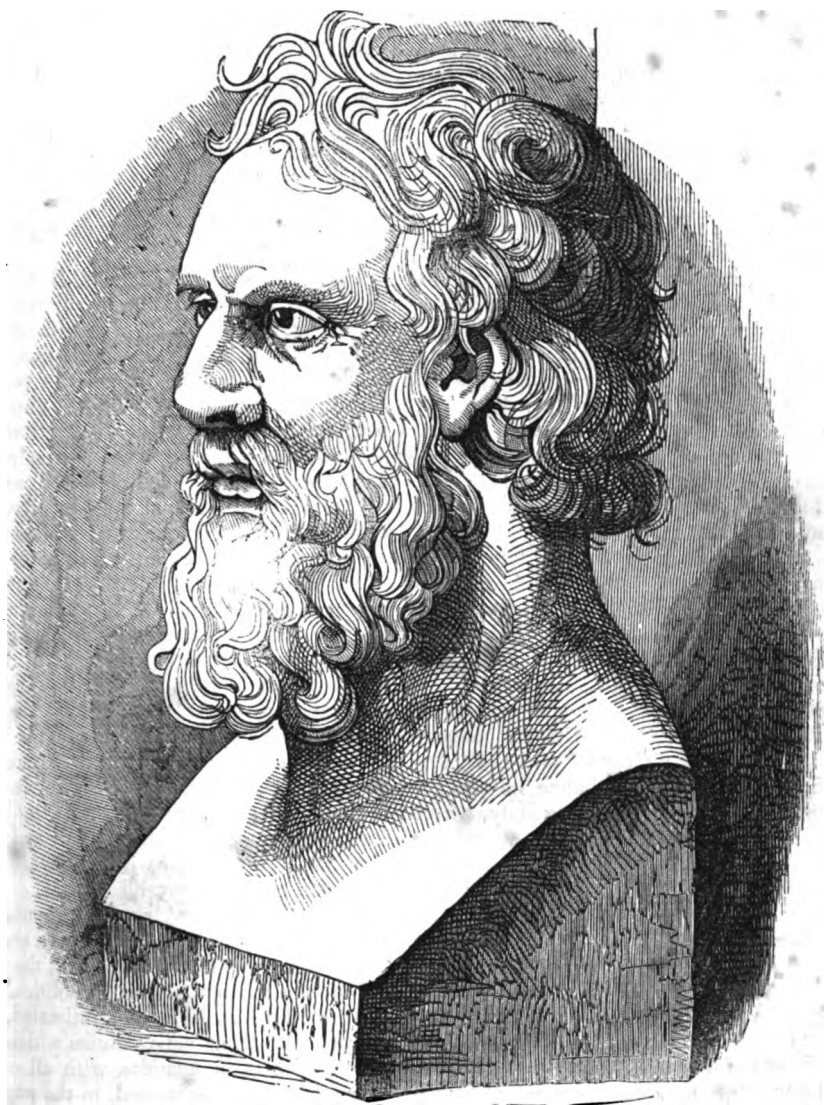
PLATO.



PLATO, the biographer and pupil of Socrates, the earliest Greek philosopher whose writings are devoted to the advancement of moral and metaphysical science, was the son of Athenian parents, but born in the island of Ægina, B. C. 429. His descent was illustrious,

being derived on the mother's side from the philosopher and lawgiver Solon, and on the father's from the ancient kings of Athens. In after-times the flattery of his admirers, not content with this distinguished genealogy, ascribed to him divine honors. Apollo, the patron deity of letters, was reported to have been the author of his being. His sweetness of discourse was foreshown by the gathering of a swarm of bees upon his lips in the cradle, and Socrates, the night before he first saw Plato, was warned of the excellences of his future pupil by a vision of a cygnet, which as it sat on his knees, suddenly became full fledged, and flew away with a melodious cry. We may be excused for repeating these fables, since the scarcity of authentic details concerning the life and history of the philosopher will reduce this paper to very narrow bounds.

The name first given to him was Aristocles, that of Plato, under which he became celebrated, is derived from the Greek adjective which means broad. The time and the reason of this change of name are both uncertain: it has been accounted for by his breadth and fullness of expression, by his remarkable width of forehead, and by other etymologies more fanciful than convincing. His manly beauty has been perpetuated in the bust from which the above sketch is taken, and his bodily vigor, and successful practice of the gymnastic exercises enjoined by custom upon the Greek youth of all ranks, and to which he himself in after-life attached great importance, are indicated by the report that he contended for the prize in wrestling at two of the great national festivals, the Pythian and the Isthmian games. Painting and poetry he also cultivated; the latter with zeal certainly, and probably not without success, for he produced an epic poem, and a drama which was brought on the stage; but he burnt his poems on becoming acquainted with Socrates, to whom he was introduced when he was about twenty years of age. During ten years he continued to be the philosopher's pupil and constant attendant; during his trial, he came forward in his defence, and offered to become his surety for the payment of such fine as might be imposed. Faithful to the last,



Plato, from an antique Bust.

he witnessed the closing scene of that great man's life, of which he has given a beautiful and affecting description at the close of the dialogue entitled "Phædon," which has for its subject the immortality of the soul, and has ever been regarded as the ablest effort of human intellect, unassisted by revelation, to prove that there is a future existence after death. This celebrated piece professes to record the conversation of Socrates upon the day of his execution. In such circumstances, the discourse naturally turned upon those expectations of the future, in reliance on which he faced death with perfect tranquillity; and the profound philosophy and lofty eloquence of this part of the composition, are relieved and set off by the dramatic interest and pathos of the concluding narrative. The "Phædon" is said to have been Cato's study immediately before he put an end to his life at Utica, a circumstance of which Addison has made use to introduce the most elaborately-wrought passage in his well-known tragedy.

After his master's death, Plato retired from Athens, and led a wandering life, frequenting the schools of the most eminent philosophers whithersoever he went. Megara was his first place of abode, and here, while the mournful details were still fresh in his memory, he is believed to have written the "Phædon," with its companion pieces, the "Criton," and the "Defence of Socrates." Thence he went to Cyrene, and from Cyrene to Italy, where he spent a considerable time in studying the rival systems of philosophy founded by Pythagoras and Heraclitus, both of which, to a certain extent, and with certain modifications, he combined and taught when he himself became the founder of a new sect. From Italy he travelled to Egypt, in elder times the fountain and seat of science. Here, according to some authors, he was admitted by the priests to a knowledge of those mysteries, of which they only had the key, and derived from them the most profound doctrines of his philosophy. This statement, however, is not confirmed by the most credible authors, and Plato himself speaks in disparaging terms of Egyptian science in his day. Cicero attributes his visit to Egypt

to the desire of improving his knowledge of astronomy, which, with others of the mathematical sciences, still flourished there, and simple curiosity would furnish a sufficient motive for travelling to a country so remarkable and closely connected with the early history of art and religion in Greece. It has been supposed that in Egypt Plato became acquainted with the Hebrew scriptures, but there appears to be no well-founded ground for this belief, which probably arose out of the clearness of his views of a future existence as compared with those of antecedent philosophers.

Upon his return to Athens, B. C. 395, Plato took up his residence adjoining, or within the precincts of, a public garden named Academia, from Academus, who bequeathed it for the use of the people. Within this garden he opened a school for instruction in the arts of disputation and philosophy; and the word "Academy," has hence obtained such celebrity, as not only to denote the school and sect of which he was the founder, but to have become in modern languages a general title for any place of education. His speculations, however, were varied by the duties of active life, for it is on record that he served as a soldier in three battles. In B. C. 389, he visited Sicily, attracted by the curiosities, natural and artificial, of that remarkable island, in which the elder Dionysius, the celebrated tyrant of Syracuse, then bore the chief sway. The despot, according to Diogenes Laertius, took offence at Plato's freedom of spirit and sold him into slavery, from which however he was soon redeemed by his friends.

Honored and beloved, with a reputation established throughout Greece as a statesman and lawgiver, Plato declined through life to take any active part in political affairs, though, as has been intimated, he did not shun those active duties which devolved on him in common with all other citizens. A life so passed, in the pursuit and teaching of abstract truth, affords little material for the biographer; but it is not to be omitted that Aristotle, his great rival in fame and influence, was Plato's pupil from the age of eighteen, during the long period of twenty years. Plato died aged about 81, B. C. 347.



Portrait of Sir Isaac Newton.

WOOLSTHORPE MANOR-HOUSE.



HE birthplace of Sir Isaac Newton, known as the Woolsthorpe manor-house, is situated in a valley in the parish of Colsterworth, near Grantham, in Lincolnshire, at the distance of about 103 miles from London. The building itself presents nothing to attract attention; but as the house in which one of the best men and one of the greatest philosophers of modern times first saw the light, it will be viewed with affectionate reverence by all who esteem high genius and true nobleness of heart.

It is pleasant to know that the vast and penetrating mind which could dictate such a work as the "Principia" was once an inhabitant of an insignificant cottage. It is pleasant to know that the author of such a theory as that developed in his great work, with all its dependent circumstan-

ces, was a mere man with all the cravings and affections of mortality; although there is something so vast and majestic in the conceptions embodied in the "Principia," that we imagine they could only be the productions of a god-like being, of an immortal and unerring mind! Yet, though his fame among men will last while the science he so enriched shall endure, there was nothing in his personal appearance or mode of life to distinguish him from his fellow-men with minds too small to compass his ideas even when developed with his own simplicity. Yes, the immortal Newton lived like other men—he ate, and drank, and slept; his dwelling was a cottage; his observatory his own garden; and here in the solitude of Woolsthorpe did he contemplate the glorious works of his Creator, and imagine the means by which the harmony of the universe is maintained.

The genius of Newton is now acknowledged by the whole scientific world; modern discoveries have altered and improved many sciences but imperfectly

known in the days of Newton, and much has been effected in clearing the obscure departments of the study to which he directed his principal attention; but not all the efforts of modern philosophers, assisted by the mechanical skill of modern days, have been sufficient to darken the fame of Newton or to eclipse any of his discoveries.

The private habits of this great man, as of many others, are not so generally known; we shall therefore present so much information on this head as we have been able to collect. Although the most trifling particulars in the life of a celebrated character are of interest to his admirers, they are not considered of sufficient importance at the time they occur to deserve to be recorded for the information of future ages; thus it is that we know so little of the motives which have actuated so many men in actions for which they are praised or blamed by posterity without sufficient cause; and in the present instance we have to regret that particulars of this nature are extremely scanty.

The Newtons appear to have located themselves at Woolsthorpe as early as the year 1561, having come thither from Westby, in Lincolnshire. It has been said that the family derived its name originally from Newtown, in Lancashire; but it seems probable, from inquiries which have been made by the biographers of Sir Isaac, acting on some hints afforded by himself, that he was descended from a Scotch family of that name in East Lothian. The genealogy of the philosopher is however involved in considerable obscurity, and he could not himself trace his descent with certainty beyond his grandfather Robert Newton, who, in 1623, became possessed of the manor-house of Woolsthorpe, which had been bequeathed to him by Robert Underwood.

Sir Isaac Newton was born on Christmas day, 1642, O. S., nearly three months after the death of his father. He was an extremely weakly child, and for some time it was thought he would not live; he is also said to have been so small for many days after his birth that "he might have been put into a quart pot." He did at last spring up, and as he grew, gradually mastered the natural weakness of his con-

stitution. The rudiments of his education were received at two small day-schools at Skillington and Stoke, in the immediate vicinity of his home, where he remained till he was twelve years of age, when he was removed to the great school at Grantham. Here he showed considerable quickness at his studies, and manifested a strong disposition for mechanics, in which he missed no opportunity for acquiring information, either theoretically or of a practical nature. He amused himself with making models of windmills, water-clocks, and other scientific toys, all of which he executed with considerable neatness and accuracy. Some of the sun-dials made by his own hand are still shown in the room used by him as a study at Woolsthorpe. Although his natural quickness of apprehension enabled him easily to master the exercises of the school, it does not appear that he was particularly partial to learning or forward in his studies. Indeed it is probable that it is to one of those accidental circumstances to which so many great events are ascribable, that we may partly attribute his future eminence. He used to relate that he was always very negligent at school, and very low in his class, until he happened to be insulted one day by a boy above him, when he determined to be revenged, not only by giving his superior a sound thrashing (which was promptly administered on the spot), but by the more noble method of superseding him in his studies. This determination gave a new bent to his character, and from that day he continued rising in the school till he was head boy. When he left Grantham school, it was determined by his mother, after great deliberation, and at the earnest solicitation of his uncle, who had observed indications of his great genius, to send him to Cambridge, whither he repaired in 1660, being admitted of Trinity College on June 5, in that year. Here he remained several years, applying himself closely to the acquisition of the more abstruse branches of knowledge, to the dissemination of which, means are appropriated in that university. The fruits of his studies were not made public until a very late period, and even then, only at the persuasions of his friends, and against his own well-known desire.



Sir Isaac Newton's Birthplace.

Yet it is remarkable that nearly all the theories and opinions which have ranked his name first among modern philosophers, were conceived, and the demonstration of them considerably advanced, while he was yet a young man.

In 1665 he left Cambridge for a short time, in consequence of the plague, which in that year committed such ravages in all the great towns and cities throughout Europe, and retired to his house at Woolsthorpe (having inherited it in 1663 from his mother), where he passed the autumn of that year.

It was on this occasion, and while sitting in the garden, that the falling of an apple from a tree led to that train of thought which ultimately produced his beautiful theory of gravitation. At least such is the substance of a popular tradition, and it is so pretty that it would be cruel to deny the fact, although there are several circumstances which might lead us to doubt it.

In person Sir Isaac Newton was of a middle stature, rather inclining to corpulency in his latter years. He had a benignant expression of countenance, to the effect of which his hair, white as silver, greatly contributed. He was blessed with a strong constitution, and to his last illness had the bloom of health mantling in his cheeks.

In company Sir Isaac was very reserved, and particularly absent in mind. Of the latter failing, excusable however in a man whose attention was occupied with such abstruse subjects, there are many pleasant stories told, one of the best of which, and perhaps the only authentic one, is that given by Dr. Stukeley, who relates that after waiting at Sir Isaac's house for a considerable time without being able to see him, he was induced to demolish a fowl prepared for the philosopher's dinner. When Sir Isaac entered he appeared astonished to find the fowl gone, and exclaimed to his visitor, "You see, doctor, how very absent we philosophers are; I really imagined I had not yet dined!" Indeed he would much rather sit down to solve a geometrical problem, than to discuss the most sumptuous dinner; and he would do one with as much celerity as the other.

When Leibnitz proposed a problem in-

tended to puzzle the philosophers of all Europe, Sir Isaac Newton solved it within six hours after he had received it; and previously he had returned an answer in as short a time to one proposed by Bernoulli, for the solution of which Leibnitz had requested an extension to twelve months of the period of six months originally assigned.

After the death of Sir Isaac, John Newton, the heir-at-law, succeeded to the manor and estates; but in 1732 they were sold to Edmund Turner, Esq, in whose family they still remain. The house was repaired in 1798, and a marble tablet fixed in the room where Newton was born, with these lines by Pope:—

"Nature and Nature's laws lay hid in night;
God said, 'Let Newton be,' and all was light."

HISTORY OF THE FIREPLACE.



THE history of the fireside may be said to commence in the dark ages; for it extends back to a time when man was unacquainted with the existence of fire. The early records of nearly all nations refer to a time when that element was unknown. Indeed instances of such ignorance have been met with in comparatively modern times. When Magellan visited the Marian islands in 1521, the natives believed themselves to be the only people in the world. They were without everything which we regard as necessities, and in total ignorance of fire. Several of their huts being consumed, they at first considered the flame to be a kind of animal that attached itself to the wood, and fed upon it. Some who approached too near, being scorched, communicated their terror to the rest, who durst only look upon it at a distance. They were afraid, they said, that the terrible animal would bite them, or wound them with its violent breathing. They speedily learned to use fire with as much address as Europeans. Few historical facts, therefore, are less doubtful than

that man was once without means of artificial heat. A Phœnician tradition attributed its discovery to a hunter observing a conflagration that had been excited in a forest by the attrition of some trees during a storm. Another tradition varies the account: in the winter season, Vulcan the king, coming to a tree on the mountains that had been fired by a thunderbolt, was cheered by its heat, and adding more wood to preserve it, he invited his companions to share in his pleasure, and thereupon claimed to be the inventor of flame. Fire once discovered, the primeval savages, though at first alarmed, gradually felt its blessed influence, and it is thus that tradition gives us an account of the earliest fireside, for around the embers of the burning trees men first learned to herd, "and as the intercourse continued under the bond of the common enjoyment, the incoherent sounds by which they expressed their emotions were by degrees roughly cast into the elements of speech; thus the discovery of fire gave rise to the first social meeting of mankind, to the formation of language, to their ultimate union, and to all the wonders of subsequent civilization." The Chinese historians attribute the earliest power of producing fire at will, by the friction of two pieces of dried wood, to Souigine, one of their first kings. This power once known, the nomadic races in all countries ever availed themselves of it; though a fire made of dried wood or grass in the open air, or in a rude tent, was their sole provision against cold for many ages.

Increased intelligence induced mankind to seek for greater warmth under substantial cover, and the first houses they took to were ready built, being chiefly caves. In the middle of these they made fires, in spite of the smoke, for which there was no other outlet than the hole by which the inhabitants came in and out. The same rude method was continued even when men learnt to build houses, and to congregate in cities, only they made a hole in the roof to let the smoke out, exactly like the Laplanders and some of the Irish at the present day.

During the last few years, public attention has been laudably directed to the defective means which still exist for warm-

ing and ventilating houses. Although we have arrived at a high state of civilization in some respects, yet the method still in use for producing an artificial climate in modern habitations, is perhaps more primitive and defective than any of our domestic contrivances.

IMPROVVISATORI



N all parts of Italy, and more particularly in the Tuscan province, there has prevailed from time immemorial a peculiar and highly interesting exhibition of intellectual power, the delivery of extempore poems, by a class of persons called

in the language of the country the improvvisatori. Something of the same kind may be found in other parts of the world, but nowhere so fully developed. In Portugal the peasants may still be heard in the summer evenings singing improvvisatized songs to the accompaniment of their guitars, but their strains are of a very humble unambitious character.

Through Tuscany, the custom of reciting verses has for ages been the constant and most favorite amusement of villagers and country inhabitants. At some times the subject is a trial of wit between two peasants; on other occasions a lover addresses his mistress in a poetical oration, expressing his passion by such images as his uncultivated fancy suggests, and endeavoring to amuse and engage her by the liveliest sallies of humor. These recitations, in which the eclogues of Theocritus are realized, are delivered in a tone of voice between speaking and singing, and are accompanied with the constant motion of one hand, as if to measure the time and regulate the harmony; but they have an additional charm from the simplicity of the country dialect, which abounds with phrases highly natural and appropriate, though incompatible with the precision of a regular language.

The more eminent of the Italian improvvisatori have been, of course, general-



The Neapolitan Improvvisator.

ly found among the higher and better educated classes. The most flourishing period of the art is considered to have been during the pontificate of Leo X., who not only encouraged its professors, but delighted in occasionally joining them in their exercises of skill. The ambition of the improvisatori at that time was to exhibit their powers in Latin verse. Andrea Marone eclipsed all competitors in this way. His recitals were accompanied by the music of his viol; and as he proceeded he seemed continually to improve in facility, elegance, enthusiasm, and invention. The fire of his eyes, the expression of his countenance, the rising of his veins, all bespoke the emotions with which he was agitated, and kept his hearers in suspense and astonishment.

Perhaps the extraordinary faculties possessed by the improvisatori were never more strikingly evidenced than in the exhibitions of Signor Sgricci, who died two or three years since. He not only recited poems of a decidedly superior character on the impulse of the moment, but actually before the eyes of an audience, on receiving a subject (and what that would be he could not possibly have known beforehand), framed the dramatis personæ of a play, the plot, the contrasts of character, and flow of story; then proceeded, act by act, and scene by scene, to pour forth the unpremeditated effusions of a rich fancy and warm imagination, and in short created a play, an entire five-act drama, in the mere time required for its utterance!

Among the more curious of such exhibitions Mr. Rose speaks of seeing a man to whom three subjects for sonnets were proposed: one of which was Noah issuing from the Ark; another, the death of Cæsar; the third, the wedding of Pantaloon. These were to be declaimed interlardedly; that is, a piece of Noah, then a piece of Cæsar, and then a piece of Pantaloon: returning after that for another piece of Noah, and so on. Nor were these difficulties enough; he was also to introduce a particular verse specified by one of the audiences at a particular place in each sonnet. He accomplished this task in ten minutes.

The different writers who have spoken of this subject account for the apparently

marvellous powers of the improvisatori by the exceeding facility of the language, the comparative laxity of its poetical rules, and the mechanical skill of introducing similes and thoughts previously prepared. The first two points must undoubtedly greatly decrease the difficulty of making extempore verses; the last, we think, not only inadequate for the object proposed, but to be altogether a mistake. The character of the compositions produced is not of the patchwork kind here indicated. The truth lies deeper: the exceeding vividness of mind that all must acknowledge to be required after any or every preparation, to carry along a dramatic fable through five acts, and by its means command the sympathies and admiration of an audience, must be sufficient in itself, without such preparation as has been supposed, and which is all that the circumstances allow. In one word, the improvisatori are really inspired poets; generally perhaps of weak, but always of ready and most excitable powers, whose emotion, being genuine and poetically expressed, naturally induces a corresponding state of feeling in their auditors. The practice is now, we believe, on the decline; the more the pity, unless something better takes its place in the hearts and minds of the people who have so long cherished it, and enjoyed by its means so many a harmless and happy hour.

FALSEHOOD.



LL careful students of human nature must have remarked the indifference with which the majority of mankind are apt to regard even the most important truths, when addressed to them in abstract or general terms. We hold the pulpit in sincere respect, and concur cheerfully in the eulogy which the gentle and amiable Cowper has passed upon it. Still, with all deference to the many good and

gifted men who fill it, it is possible that, as an instrument of doing good, it might, like most others, be somewhat improved. We think, for example, that, in the delineation of particular virtues or vices, there might be, with advantage, a little more going into detail—a condescending upon the precise shapes and phases under which these may be found in every-day life. The great majority of men feel comparatively at ease when they hear this and the other attributes of evil spoken of in vague and indefinite terms. Speakers of the class alluded to, however well-meaning, do, we fear, far less good than they may suppose. Unless there be some speciality of application, some effort to present a life-like portrait of the evil assailed, it is very far from being unlikely, that, in the audience, not a few may be committing the very sin, even while the preacher is exposing it. He may be denouncing avarice, while, in yon nook, the avaricious man is telling over his gold, and laying fresh schemes of aggrandizement. He may be denouncing malignity; but the malign, even while the tones are falling on their ears, are plotting new scandals to propagate as soon as they have crossed the church-door. He may inveigh against envy; but the eye of the envious is meanwhile fixed on some part of the dress, or property, or good fortune of their neighbor in the next pew.

But, without saying more about the pulpit—and where there is so much to praise we are loath even to insinuate defect or blame—we hope the pages of this magazine will not be considered as trenching upon its sacred prerogatives should they occasionally deal out a few kindly hints respecting prevailing vices, or those moral graces so essential to our welfare and happiness. To aid in the smallest degree in correcting the faults of mankind, or strengthening their virtues, is no mean honor; and perhaps we may do some little good in this way, by an article, now and then, like that we propose at present to write, about one vice too prevalent, we grieve to say, in every circle of society—we mean *falsifying*.

The forms in which this vice may be met with are more numerous than perhaps most people imagine. There are falsifiers

—for we drop the harsher and more vulgar term—so young that they can with difficulty liap the syllables in which they rend their untruths. There are others so old that their tongues almost deny them utterance when they propagate their slanders. There are others so fair, that, when one hears them circulating their calumnies, he can not help recalling a certain proverb about a “jewel of gold in a swine’s snout.” The beggar tells a tissue of falsehoods when craving alms at your door; and some would not care to say that courtier and falsifier are all but convertible terms. In point of fact, it is not easy to tell, even when we would—to borrow the legal phrase—the truth, the whole truth, and nothing but the truth. The statement, without suppression or exaggeration, without a shade to suit the views of him who utters it, is not, kind reader, a commodity you are every day meeting with. The motives to falsehood are numerous; and the forms in which this vice may be found among men are consequently so too. There is one whom, in the absence of a better term, we may call the *silent falsifier*. There may be more wicked ones than he, but assuredly there is none meaner: he is an ungallant and ungenerous soul; he has a paltry, cringing heart in his bosom; there is nothing noble and magnanimous about him; he is deficient in all great qualities; he is not a brother to his race. Fie on him! rather than provoke the frown of some one whose favor might be of service to him, the wretch will hear, without defending them, his old father defamed, or shame cast on the gray hairs of her who bore him. Your mute falsifiers do a world of mischief in their own petty way. They hear your character assailed; circumstances stated to your disadvantage, which they well know to be an utter perversion of the truth; impressions conveyed to one or more listeners which they are quite aware are both false and injurious: a word from them might silence the detractor; but no; they are either glad to hear you defamed, or it is their interest that your reputation should be suspected, or they tremble to incur the displeasure of the party traducing you, and they are as quiet, as immovably taciturn, as if they had been born dumb. Who says that

these men are not falsifiers? Who refuses our right to class them with the vile herd of slanderers? It is a nasty heresy that a man may surely hold his tongue if he pleases. Proverbially, silence and assent are the same thing. There are times when not to speak out in defence of our opinions, is to prove recreant to them; and so, too, there are times when not to speak out in defence of our friend is foully and ignobly to slander him—to rob him of that good name, compared with which, Shakspeare truly says, a man's purse is but trash. Your silent falsifiers go further at times. There are many ways in which they evince how willing they are to wound, though afraid to strike. Heaven save us from the men who shake the head, shrug the shoulders, give the piteous whine, or put on the rueful aspect—all of which, when the fabrication is going round, are but different ways of saying, *it is very bad, and but too true!*

The *vain falsifiers* form a numerous class. It is easier to keep one's temper serene when speaking of this class; for, except when their own claims happen to come into competition with those of others—which, however, is frequently the case—they are not addicted to detraction. The truth is, they are rather fond of the idea that all the world are rich, and respectable, and happy, were it for no other reason than this, that they feel it rather creditable to themselves that they belong to so excellent a community. As for traducing their neighbors, if you take care not to push the claims of the latter too eagerly, so as to bring them into close rivalry with their own, they will scarcely say a bad word against any one, finding that to be a sufficiently fertile topic on which Lord Byron has shrewdly remarked, most men are fluent, none agreeable—we mean, self. The vain, taken as a class at least, have too much to say about themselves to have leisure for discussing the character of their acquaintances; but their besetting sin leads to falsehood of another kind. Excessive vanity and the truth-telling habit can scarcely be found in the same individual. Every conceited person is, we may almost say, of necessity a falsifier. His ridiculous fictions are just the fuel to his vain imaginations; his

lies, if we may so express ourselves, are so many imps going about seeking what they can devour as provender to his voracious vanity. There are few who are not in some degree censurable on this score. Whose conscience does not accuse him with having occasionally perverted the truth, that he might be thought richer, more talented, or more benevolent, than he really is? But while most men err thus in some measure, there are not a few who go to great extremes. Their vanity so beguiles them into dissimulation and falsehood that they come to lose all sense of the distinction between what is truth and what is not. Listen to them in the social circle. How inflated their tone! How extravagant their statements! How they deal in superlatives! What playthings they make of themselves to the discerning and quizzical! Do they talk of their strength? you would fancy they could heave mountains. Of their swiftness of foot? they could vie with the mountain roe. Of their talents? you feel that you have the honor to sit side by side with another Milton or another Locke. Of their wealth? they are a match for the Rothschilds. Of their connexions? who ever heard of such prosperous mortals? They are all people of fashion and fortune—all above dependence—all shining in the upper circles—their carriage just left the door as you entered—of course you have heard of the immense accession to their income they got t'other day!

Addison somewhere remarks, that if there be anything which makes human nature appear ridiculous to beings of superior faculties, it must be pride, well aware as they are of the vanity of those little supernumerary advantages on which men plume themselves. But one does not need to be an angel to be astonished and diverted at the silly self-conceit, so fruitful in falsehood, which has been described. The violation of truth, too, in this instance, is all the worse that it panders to another vice, namely, extravagant self-appreciation. It is a wicked daughter feeding a bad mother.

The *avaricious falsifiers* are anything but few in number. It seems they were not unknown in the days of Solomon. The wise man sketches them thus, with his

graphic pen : "It is naught, it is naught, saith the buyer ; but when he is gone his way, then he boasteth." They are plentiful in our times too. They sacrifice truth at the shrine of worldly aggrandizement ; they tell lies to fill their pockets ; contract heavy guilt, that, like Whang the miller, they may have the exquisite pleasure of thrusting their hands into a heap of gold up to the elbow. There were, in the time of the king we have named, the seller, who, when disposing of his goods, greatly overpraised them ; and the purchaser, who, to get them at a lower price, did exactly the reverse. Thus falsehood went on, out in the market, and on both sides of the counter—and so it does still. Oh ! but the maxim is current in the world, that a man wont thrive now-a-days if he be sternly honest and unswerving in his regard to truth. Now, there is no use in making the world worse than it is. Rich knaves there are, no doubt : they are the exception, not the rule, however ; and were there a window in their bosoms, and were you, gentle reader, allowed to look through it, you would pity them, and call them "poor indeed." The shortest and easiest road to wealth is clearly that pointed out by honesty and worth. Is there a merchant in your community who is known to give his candid opinion of the quality of his goods—known neither to over-praise nor over-charge—who gives the same article at the same price to the injudicious and skilful alike ? Be sure, other things being equal, that man is a thriving man ; his shop is frequented by all who wish to deal fairly ; his reputation is his bank. And so is it in every department of life. There is, if men would believe it, no need for lying ; the arrangements of Providence are not such, that if a man be truthful and honest he must needs starve, and that the deepest rogue will infallibly be the most prosperous.

But of all kinds of falsifiers the *malicious* is the most detestable. A poet of our own day has designed slander the "foulest whelp of sin." A malicious falsifier—that is, one who invents and propagates lies, with the view of injuring the peace, prosperity, or honor of another—is almost the biggest reproach to his species we know of. He looks with a jaundiced eye

on all around him ; his weal is the wo of others ; he "sleeps not except he has done mischief ;" he lives upon the calamities and misfortunes of mankind ; worth, fame, talent, if possessed by those around him, only serve to provoke his resentment toward them, and call forth his slanders. He is a moral assassin ; and, if character be more sacred than life, the malign traducer of it is every way as loathsome a being as he who sheds the blood of the innocent. We stop not to enlarge this picture. It is a sickening thing to investigate deformity. The poet we have just quoted has said with truth and power :—

"The man,
In whom this spirit entered was undone ;
His tongue was set on fire of hell ; his heart
Was black as death."

There are other forms of this prevailing evil on which we do not dwell at present. Those we have sketched are perhaps the most common. May we give a kindly hint or two to those who happen to glance at this page ? Have a passionate attachment to the truth. Never cross its sacred line to advance your interests, gratify your vanity, or injure the man you love least. Check, in all over whom you have influence, the slightest symptom of the vice in question. The habitual falsifier will not escape detection even in this life, and, when detected, he will be held in universal contempt. Shun paltry equivocation on the one hand, and inflated exaggeration on the other. Forget not that it is the intention to deceive that makes the lie, and not the mere phraseology in which it may be couched. The truth-telling habit gives to one so sunny a bosom, and earns for him, eventually, so fair a reputation, that, irrespective of higher motives, it is well worth being cultivated. Crabbe's "noble peasant," Isaac Ashford, was a model in this respect :—

"Of no man's presence Isaac felt afraid,
At no man's question Isaac looked dismayed :
Shame knew him not ; he dreaded no disgrace ;
Truth, simple truth, was written on his face."

THERE are two thousand five hundred known species of fishes ; forty-four thousand of insects ; seven hundred of reptiles ; four thousand of birds ; and five thousand of mamiferous animals.

PROGRESS OF AFRICAN DISCOVERY.



N the time of Herodotus, and long afterward, the general opinion was that Africa did not extend so far south as the equatorial line. There existed, however, a tradition that Africa had been circumnavigated by the Phœnicians about six centuries before the Christian era; but if the southern promontory of Africa had really been reached, it is difficult to conceive how so erroneous an impression could have prevailed as to the extent of the continent. It is, therefore, most probable that such a voyage had never succeeded; and, indeed, the circumstances under which it was prosecuted, according to the accounts which have come down to us, only add an additional feature of improbability to the story. Turning to modern times, we find, at the commencement of the fifteenth century, that Europeans were only acquainted with that portion of the western coast of Africa which extends from the straits of Gibraltar to Cape Nun, a line of coast not exceeding six hundred miles in length. The Portuguese had the honor of extending this limited acquaintance with the outline of the African continent. Their zeal for discovery in this direction became truly a national passion, and the sovereigns and princes of Portugal prosecuted this object with singular enthusiasm. By the year 1471 the Portuguese navigators had advanced $2\frac{1}{2}^{\circ}$ south of the line. In 1484, Diego Cam reached 22° south latitude. The next navigator, Bartholomew Diaz, was commanded to pursue his course southward until he should reach the extremity of Africa, and to him belongs the honor of discovering the Cape of Good Hope, the name given to it at the time by the king of Portugal, though Diaz had named it Cabo Tormentoso (the Cape of Tempests). The Cape of Good Hope was at first frequently called the Lion of the Sea, and also the Head of Africa. In 1497, Vasco de Gama set forth with the intention of reaching India by sailing round the Cape of Good Hope. After doubling

the cape, he pursued his course along the eastern coast of Africa, and then stretched across the ocean to India. The Portuguese had now ascertained the general outline of Africa, and the position of many of the principal rivers and headlands. With the exception of a portion of the coast from the straits of Bab el Mandeb to Mukdesha, situated in 3° north latitude, the whole of the coast had been traced by the Portuguese, and their zeal and enthusiasm, which had at one period been treated with ridicule, were at length triumphantly rewarded, about four years before Columbus had achieved his great discovery, which, with that of Vasco de Gama, amply repaid a century of speculative enterprise. This interesting combination of events had a sensible effect upon the general mind of Europe. The Portuguese soon formed settlements in Africa, and began to acquire a knowledge of the interior of the country. They were followed by the French, and afterward by the English and the Dutch.

It is chiefly within the last fifty years that discoveries in the interior of Africa have been perseveringly and systematically prosecuted. In 1788 a society was established in London with the design of encouraging men of enterprise to explore the African continent. John Ledyard, an American, was the first person selected by the African association for this task, and he set out in 1788 with the intention of traversing the widest part of the continent from east to west, in the supposed latitude of the river Niger. Unfortunately he was seized at Cairo with a fever, of which he died. He possessed few scientific acquirements; but his vigor and powers of endurance, mental and bodily, his indifference to pain, hardship, and fatigue, would have rendered him an admirable geographical pioneer. "I have known," he said, shortly before leaving England for the last time, "hunger and nakedness to the utmost extremity of human suffering; I have known what it is to have food given as charity to a madman, and have at times been obliged to shelter myself under the miseries of that character to avoid a heavier calamity. My distresses have been greater than I have ever owned, or ever will own, to any man. Such evils are terrible to bear, but they

never yet had the power to turn me from my purpose." Such was the indomitable energy of this man, the first of a long list of victims in the cause of African discovery. Mr. Lucas, who was despatched by the association to supply the place of Ledyard, was compelled to return home in consequence of several of the countries through which he would have to pass being engaged in hostilities. In 1790, Major Houghton, an officer who was acquainted with the customs of the Moors and Negroes, proceeded to Africa under the auspices of the association, and had made considerable progress in the interior, when, after having been treacherously plundered and left in the desert, where he endured severe privations, he reached Jarra, and died there in September, 1791, it being strongly suspected that he was murdered. The next individual on whom the association fixed was Mungo Park, who proceeded to the river Gambia in 1795, and thence set out into the interior. The great object accomplished during his journey was that of successfully exploring the banks of the Niger, which had previously been considered identical with the river Senegal. In 1804, Park set out upon his second journey, which was undertaken at the expense of the government. The plan of former travellers had been to accompany the caravans from one part of the country to another; but in this expedition Park required a party of thirty-six Europeans, six of whom were to be seamen and the remainder soldiers, it being his intention, on reaching the Niger, to build two vessels, and to follow with his party the course of the river. If the Congo and the Niger were the same stream, as was then supposed, he anticipated little difficulty in his enterprise; but if, as was also maintained, the Niger terminated in swamps and morasses, many hardships and dangers were expected in their subsequent progress. Park at length reached the Niger, accompanied only by seven of his party, all of whom were in a state of great weakness from the effects of the climate. They built one vessel, and on the 17th of November, 1805, were ready to embark on the river, previous to which Park sent despatches to England. His party was now reduced to five, his

brother-in-law having died a few days before. Park's spirit, however, remained undaunted. "Though all the Europeans who are with me should die," said he, in his last letters to England, "and though I myself were half dead, I would still persevere; and if I could not succeed in the object of my journey, I would at least die in the Niger." He embarked, therefore, with the intention of sailing down the river to its mouth, wherever that might be; but after passing Timbuctoo and several other cities, he was killed in the Niger, at a place called Boussa, a short distance below Yaouri. No part of his journal after he left Sansanding has ever been recovered.

In 1797 the African association had engaged Mr. Hornemann, a German, who left Cairo in September, 1798, with the intention of carrying into effect the objects of the association by proceeding as far southward and westward as he could get. In his last despatches he expressed himself confident in being able to succeed in reaching a greater distance into the interior than any other European traveller; but after reaching Bornou, no certain intelligence was ever afterward heard concerning him. Mr. Hornemann learned many particulars which had not before been known in Europe respecting the countries to the east of Timbuctoo. Mr. Nicholls, who was next engaged, arrived in the gulf of Benin in November, 1804, and died soon afterward of the fever of the country. Another German, Bœntzen, was next sent to Africa. He had bestowed extraordinary pains in making himself acquainted with the prevailing language, and, throwing off his costume, proceeded in the character of a Mussulman, but unhappily was murdered by his guides on the way to Soudan. The last traveller sent out by the association was Burckhardt, a Swiss. He spent several years in acquiring a knowledge of the language and customs of the people whom he intended to visit, and, like Mr. Bœntzen, assumed the characteristics of a Mussulman. He died at Cairo in 1817, his travels having been chiefly confined to the Abyssinian countries.

In 1816 an expedition was sent out by the government, under the command of Captain Tuckey, to the river Congo, under

Junction of the Rivers Tehadda and Quorra.



the idea, in which Park had coincided, that it and the Niger were the same river. Captain Tuckey ascended the Congo for about 280 miles. At the same time, Major Peddie, and, after his death, Captain Campbell, proceeded from the mouth of the river Senegal as far as Kakundy. In 1817, Mr. Bowdich explored the countries adjoining Cape Coast Castle. In 1820, Mr. Jackson communicated an interesting account of the territories of Timbuctoo and Houssa, from details which he had collected from a Mussulman merchant. In 1819, and in 1821, the expeditions of Messrs. Ritchie and Lyon, and of Major Laing, showed the strong and general interest on the subject of African geography. In 1822, the important expedition under Major Denham and Lieut. Clapperton set forth. After crossing the desert, the travellers reached the great inland sea or lake called the Tchad, the coasts of which to the west and south were examined by Major Denham. This lake, from 400 to 600 feet above the level of the sea, is one of the most remarkable features in the physical geography of Africa. Lieut. Clapperton, in the meantime, proceeded through the kingdom of Bornou and the country of the Fellatahs to Sockatoo, situated on a stream supposed to run into the Niger. A great mass of information respecting the countries eastward of Timbuctoo was the result of his expedition. Soon after his return to England, Clapperton was sent out by the government to conduct a new expedition, and was directed to proceed to the scene of his former adventures. Having reached the Niger at Boussa, where Park was killed, he passed through various countries, and reached Sockatoo, where he died; and Lander, his friend and servant, commenced his return to England with Clapperton's journals and papers. Major Laing, meanwhile, had visited Timbuctoo, and transmitted home accounts of this famous city, where he spent some weeks; but on his return he was murdered, and his papers have never been recovered.

Though the knowledge of interior Africa now possessed by the civilized world is the progressive acquisition of many enterprising men, to all of whom we are profoundly indebted, it can not be denied that

the last great discovery has done more than any other to place the outline of African geography on a basis of certainty. When to this is added the consideration that it opens a maritime communication into the centre of the continent, it may be described as the greatest geographical discovery that has been made since that of New Holland.

It is estimated that the course of the Quorra is about 2,300 miles. The countries watered by it and its tributaries are fertile, and enjoy a climate said to be much superior to that of many other parts of Africa. We take the following abridged descriptions from the journal of John and Richard Lander, who were commissioned by the British government, to ascertain the course of the Niger, and to follow its channel to its termination wherever it might be. On the 24th of June, 1829, getting into the main stream of the Niger, they found it flowing "through a rich and charming country." The channel from being half a mile in breadth, gradually widened to rather better than a mile. "Beautiful, spreading, and spiry trees adorned the country on each side of the river, like a park; corn, nearly ripe, waved over the water's edge; large open villages appeared every half hour; and herds of spotted cattle were observed grazing and enjoying the cool of the shade. The appearance of the river, for several miles, was no less enchanting than its borders: it was as smooth as a lake; canoes laden with sheep and goats were paddled by women down its almost imperceptible current; swallows and a variety of aquatic birds were sporting over its glassy surface, which was ornamented by a number of pretty little islands."

June 25th. The river gradually widened to two miles, and continued so as far as the eye could reach. "It looked very much like an artificial canal, the banks having the appearance of a dwarf wall, with vegetation beyond. In most places the water was extremely shallow, but in others it was deep enough to float a frigate. During the first two hours of the day, the banks were literally covered with hamlets and villages; fine trees, bending under the weight of their dark foliage, everywhere relieved the eye from the glare of the sun's rays, and, contrasted with the lively ver-

ture of the little hills and plains, produced the most pleasing effect." Afterward the scenery decidedly changed, the banks consisting of "black rugged rocks: large sand-banks and islands were scattered in the river, which diverted it into a variety of little channels."

June 27th. A range of black rocks running directly across the stream, and the water, finding only one narrow passage, rushed through it with great impetuosity. The canoe was lifted by main force into smoother water, and when this reef was passed the river offered no similar impediments to its navigation. It now presented a noble appearance. Not a single rock or sand-bank was anywhere perceptible, its borders resumed their beauty, and a strong, refreshing breeze, which had blown during the whole of the morning, now gave it the motion of a slightly-agitated sea. This day they passed two verdant isles of singular beauty, as charming as the fabled gardens of Hesperia.

August 4th. At no great distance from this place (Boussa), and within sight of it, all the branches of the Niger meet, and form a beautiful and magnificent body of water, at least seven or eight miles in width. At Boussa, within five miles, the river is only a stone's throw across, and the channel is of proportionate depth—circumstances which favor the opinion that a portion of its waters is conveyed by subterranean channels from the town of Garinica to a few miles below Boussa.

October 4th. "The banks of the river near Lever, are high, being, according to our estimation, about forty feet above the river, and steep to the water-side. The river itself appeared deep, and free from rocks of any kind; its direction nearly south. We ran down the stream very pleasantly for twelve or fourteen miles, the Niger, during the whole distance, rolling grandly along—a noble river, neither obstructed by islands nor deformed by rocks and stones. Its width varied from one to three miles. Both banks of the river were overhung with large shady trees." The country seen from the river appeared open and well cultivated, and thickly inhabited.

October 5th. "Just below the town of Bajiebo the Niger spreads itself into two

noble branches of nearly equal width, formed by an island. The country beyond the banks was very fine." After passing the above island, both banks of the river "were embellished with mighty trees and elegant shrubs, which were clad in thick and luxuriant foliage, some of lively green, and others of darker hues; and little birds were singing merrily among their branches. Magnificent festoons of creeping plants, always green, hung from the tops of the tallest trees, and, drooping to the water's edge, formed immense natural grottoes, pleasing and grateful to the eye." But the travellers remark: "Yet with all its allurements, there is something wanting in an African scene to render it comparable, in interest and beauty to an English landscape." They add, that "In Africa, generally speaking, a loneliness, a solemnity, a death-like silence pervades the noblest and most magnificent prospects, which has a tendency to fill the mind with associations of sadness."

October 16th. The travellers in vain endeavored to effect a landing, but unfortunately every village was situated "behind large thick morasses and shingly bogs," which it was impossible to penetrate. The width of the river seemed to be two or three miles across, and at other places double that width. The current was running at the rate of three or four miles an hour, and the direction of the stream was nearly east. In the course of this day and the following night they had travelled a distance little short of a hundred miles. The character of the scenery completely changed. "The Niger, in many places and for a considerable way, presented a very magnificent appearance, and we believe it to have been nearly eight miles in width."

October 17th. "The banks now became high and beautifully cultivated; palm-trees grew in profusion, and the towns and villages were not more than two or three miles from each other. We observed some hundreds of large canoes, with a hut in their middle, passing along the river, some crossing and re-crossing to the opposite banks, while others were pursuing their course along them. They mostly seemed to contain families of

people ; for while the men were paddling, the women and girls were singing to a guitar with their little delicate voices, and produced a very pretty effect." The river was estimated to be from three to five miles in width.

October 25th. On this day our travellers reached the junction of the Quorra and Tchadda, a view of which is given in our engraving. "At one, A. M., the direction of the river changed to south-south-west, running between immensely high hills. At five o'clock this morning, we found ourselves nearly opposite a very considerable river, entering the Niger from the eastward : it appeared to be three or four miles wide at its mouth, and on the bank we saw a large town, one part of which faced the river and the other the Quorra. We at first supposed it to be an arm of that river, and running from us, and therefore directed our course for it. We proceeded up it a short distance, but finding the current against us, and that it increased as we got within its entrance, and our people being tired, we were compelled to give up the attempt, and were easily swept back into the Niger. The banks on both sides of the Tchadda, as far as we could see up it, were very high, and appeared verdant and fertile." In the course of the day they found the bed of the river with a rocky bottom, which caused its surface to ripple exceedingly.

October 26th. They passed a town situated close to the water's edge, in an elevated situation and on a fine greensward, supposed to be Atta, the appearance of which is described as "unspeakably beautiful." Afterward, for thirty miles, not a town or village, or even a single hut, was to be seen. "The whole of this distance our canoe passed smoothly along the Niger, and everything was silent and solitary ; no sound could be distinguished save our own voices and the plashing of the paddles with their echoes ; the song of birds was not heard, nor could any animal whatever be seen ; the banks seemed to be entirely deserted, and the magnificent Niger to be slumbering in its own grandeur."

November 8th. The travellers to day found themselves "on an immense body of water, like a lake, and at the mouth of

a very considerable river flowing to the westward, it being an important branch of the Niger. Another branch also ran hence to the southeast, while our course was in a southwesterly direction, on the main body ; the whole forming, in fact, three rivers of considerable magnitude. On Sunday, *November 14th*, to their great joy, they came within the tide-way of the river. Their progress was a good deal interrupted by sand-banks. On the 15th, they landed, and while at breakfast on shore the tide ebbed and left their canoes lying in the mud ; and on the 18th, they reached the sea, and went on board an English brig at the mouth of the river. As they approached the sea the banks were so much overflowed that the trees appeared to be growing out of the water. On the 9th of June, 1831, the two brothers reached England with the intelligence of their discovery.

In 1832, some spirited merchants of Liverpool fitted out two steam-vessels and a transport for the purpose of attempting the ascent of the Quorra to Sockatoo or Timbuctoo, and to carry on a trade during their voyage. Unfortunately the expedition failed in consequence of the wreck of one of the steamboats. Yet the countries watered by the Niger having been opened by the discovery of the Landers, the period probably is not far distant when this hitherto-neglected portion of the globe may become an extensive field for commerce and industry. Mr. Laird, a recent traveller in Africa, says : "The delta of the Niger alone, if cleared and cultivated, would support a population, in proportion to its area, far exceeding anything known in Europe."

BENEFITS OF ADVERSITY.—A smooth sea never made a skilful mariner ; neither does uninterrupted prosperity and success qualify for usefulness or happiness. The storms of adversity, like the storms of the ocean, arouse the faculties, excite the invention, prudence, skill and fortitude of the voyager. The martyrs of ancient times, in bracing their minds to outward calamity, acquired a loftiness of purpose, a moral heroism, worth a life of softness and security.

GOD IN HISTORY.



HE ruins of kingdoms!—the relics of mighty empires that were!—the overthrow or decay of the master-works of man, is, of all objects that enter the mind, the most

afflicting. The high-wrought perfection of beauty and art seems born but to perish; and *decay* is seen and felt to be an inherent law of their being. But such is the nature of man, that even while gazing upon the relics of unknown nations, which have survived all history, he forgets his own perishable nation in the spectacle of enduring greatness.

We know of no spectacle so well calculated to teach human humiliation, and convince us of the utter fragility of the proudest monuments of art, as the relics which remind us of vast populations that have passed from the earth, and the empires that have crumbled into ruins. We read upon the ruins of the *past* the fate of the *present*. We feel as if the cities of men were built on foundations beneath which the earthquake slept, and that we abide in the midst of the same doom which has already swallowed so much of the records of mortal magnificence. Under such emotions, we look on all human power as foundationless, and view the proudest nations of the present as covered only with the mass of their desolation.

The Assyrian empire was once alike the terror and wonder of the world, and Babylon was perhaps never surpassed in power and gorgeous magnificence. But where is there even a relic of Babylon now, save on the faithful pages of Holy Writ? The very place of its existence is a matter of uncertainty and dispute. Alas! that the measure of time should be doomed to oblivion; and that those who first divided the year into months, and invented the zodiac itself, should take so sparing of immortality as to be, in the lapse of a few centuries, confounded with natural phenomena of mountain and valley.

Who can certainly show us the site of the tower that was "reared against

heaven"? Who were the builders of the pyramids that have excited so much astonishment of modern nations?

Where is Rome, the irresistible monarch of the east, the terror of the world? Where are the proud edifices of her glory, the fame of which has reached even to our time in classic vividness? Alas, she, too, has faded away in sins and vices. Time has swept his unsparing scythe over her glories, and shorn this prince of its towering diadems.

Throughout the range of our western wilds, down in Mexico, Yucatan, Bolivia, &c., travellers have been able to discover the most indisputable evidences of extinct races of men highly skilled in learning and the arts, of whom we have no earthly record, save the remains of their wonderful works which time has spared for our contemplation. On the very spot where forests rise in unbroken grandeur, and seem to have been explored only by their natural inhabitants, generation after generation has stood, has lived, has warred, grown old and passed away: and not only their names, but their nation, their language has perished, and utter oblivion has closed over their once populous abodes. Who shall unravel to us the magnificent ruins of Mexico, Yucatan, and Bolivia, over which hangs the sublimest mystery, and which seem to have been antiquities in the day of Pharaoh? Who were the builders of those gorgeous temples, obelisks, and palaces, now the ruins of a powerful and highly-cultivated people, whose national existence was probably before that of Thebes or Rome, Carthage or Athens? Alas! there is none to tell the tale; all is conjecture, and our best information concerning them is derived only from uncertain analogy.

How forcible do these wonderful revolutions, which overturn the master-works of man, and utterly dissolve his boasted knowledge, remind us that *God is in them all*! Wherever the eye is turned, to whatever quarter of the world the attention is directed, there lie the remains of more powerful, more advanced, and more highly-skilled nations than ourselves, the almost obliterated records of the mighty past.—How seemingly well-founded was the delusion, and indeed how current even now,

that the discovery of Columbus first opened the way for the cultivated people in the "new world." And yet how great reason is there for the conclusion, that while the country of Ferdinand and Isabella was yet a stranger to the cultivated arts, America teemed with power and grandeur; with cities and temples, pyramids and mounds, in comparison with which the buildings of Spain bear not the slightest resemblance, and before which the relics of the old world are shorn of their grandeur?

All these great relics of still greater nations, should they not teach us a lesson that *God is in history* which man can not penetrate? If the historian tells us truly that a hundred thousand men, relieved every three months, were thirty years in erecting a single Egyptian pyramid, what conclusion may we not reasonably form of the antiquities of our own continent, which is almost by way of derision, one would suppose styled the "*New World*!"

THE PERUVIANS.



OF the early history of the Peruvians we have but little knowledge, owing to that barbarian policy exercised by the followers of Cortez and Pizarro, in destroying everything belonging to the tribes which they conquered. Like the Mexicans, the Peruvians had advanced in art, science, and learning, under the administration of successive wise rulers, and their state archives contained written histories of their country, from the dawn of civilization among them, till the period of the conquest. But the superstitious Spaniards committed these works to the flames, because of their heathen origin, and we are obliged to depend almost exclusively upon the truth of tradition, for the knowledge we possess of the history of this people during the inca dynasty.

Like other aborigines of this continent, the Peruvians were nomadic tribes and gained a subsistence by hunting and fish-

ing. Superstitious in the extreme, their objects of worship were as numerous as those of the Egyptians. They adored mountains because they sent forth refreshing streams; the rivers because they fertilized the soil; the trees that bore fruit, the animals they slew for food, and the ocean as the great mother of fishes.

Fear seemed to be the great prompter to worship, and their sacrifices were propitiatory, rather than offerings of gratitude and love. They erected altars to tigers and serpents, sacrificed to the directors of storms, whirlwinds, and volcanoes, and frequently offered up their children to avert the wrath of some imaginary malignant deity. They believed, however, in a great head, a universal ruler, to whose will all other gods were subordinate; and to the benevolence of this great being, they ascribed the elevation of their country and its inhabitants from a wilderness and ferocious barbarism, to a well cultivated and quite civilized region.

According to the chronicles of the ancient priests, and the traditions of the present natives of Peru, Divine Omnipotence compassionately sent to them the wise and virtuous Manco Capac and the beautiful Oello, his sister, and his wife, for the purpose of spreading the seeds of civilization among them, that they might reap a rich harvest of happiness. This event occurred about four hundred years prior to the Spanish invasion. Whence they came, none knew, but it was generally supposed that they came down from heaven, commissioned to increase the happiness of the human race. However fabulous their traditions may appear concerning this pair and their acts, there can be no doubt of the fact, that Manco Capac, one of the first of the inca dynasty, was a man of extraordinary abilities, and did much toward raising the people from a state of great degradation, to comparative civilization and happiness. He performed the double duties of lawgiver and priest, instructing them in those principles of jurisprudence, founded upon social sympathies, which tend to moral and intellectual elevation; and he taught them a religion far more rational and humane than they were before influenced by.

Manco Capac taught the wandering



Interior of the Temple of the Sun, at Cusco, Peru.

Peruvians to till the ground and irrigate it by changing the course of streams, while Oello instructed the women to educate their children in the ways and precepts of virtue, and to obey their husbands. He fixed the division of lands and enjoined every man to devote some portion of his time to the assistance of his neighbor, thus promoting brotherly love. He instructed the people to show their gratitude by worshipping the sun, the great vivifier of creation, and thus based a system of religion upon one of the best of human virtues. In a little time, wandering tribes became assimilated, and they built themselves houses and overturned their altars red with the blood of human victims. In a word, this great reformer who doubtless came from the Toltecs or Aztecs, then quite a civilized people inhabiting Central America, poured a flood of light into the dark valleys of Peru that unfolded the beauties of civilization and made the "desert blossom as the rose."

But in the judicial and religious systems of this reformer, there were serious defects. He compelled his subjects to submit in all things to the will of the incas, or kings, and materially retarded the progress of genius, by making it unlawful for a son to follow any profession different from his father's. The latitude given to the incas had a mischievous effect, and his successors became despotic in the extreme. Their subjects were permitted to approach them only with rich offerings in their hands, and the people of a whole province have been destroyed, to gratify the cruel caprice of one of these rulers. So divine and reverend was the inca considered by the people, that when he died, many human victims were sacrificed at his tomb.

Their civil and religious laws were rigidly administered, and many of them were of the most sanguinary nature. For instance, if a priestess of the sun (which office was filled by virgins), broke her oath of chastity and was discovered, she was buried alive, her paramour suffered the most cruel torments, and the father, mother, brothers and sisters of both, were considered accomplices and were all thrown upon a funeral pile together and consumed. A boundary was drawn round the birth-

place of the two lovers, and it was for ever afterward left a wilderness.

Many remains of ancient civilization may still be seen in Peru, especially in the vicinage of Cuzco, the capital of the incas. There are remains of a road extending from Cuzco to Quito, a distance of fifteen hundred miles, and in the lower part of the country was another one of nearly equal magnitude. Many fine roads extended from the centre to the confines of the empire, when Pizarro entered that country. Along these roads, granaries were built at certain distances, and the incas built houses of charity that were constantly open to the weary traveller. Temples, fortresses, and canals, were to be seen in all directions, and the amount of gold used in the erection of fanes and monuments, was immense. In the imperial gardens of Cuzco, trees and shrubs of gold and silver were formed, and every article in the interior of the palace was made of the precious metals. It was these immense treasures that excited the cupidity of the Spaniards, and caused the overthrow of the great empire of the incas.

The most magnificent of all the Peruvian temples, was that of the sun at Cuzco, the interior of which is represented in our engraving.

The mode of worship in the temple of the sun, was similar to that of Heliopolis in Egypt, where this great luminary was adored. His golden image occupied a large portion of one side of the interior of the temple, and before this the worshippers prostrated themselves with rich offerings in their hands, which were received by the attendant priests. Several virgins, selected from the first families in the kingdom, were in constant attendance, whose duty it was to make oblations of wine to the burning deity and chant hymns of praise to the great Father of Light.

A Dominican monastery now occupies the site of the temple of the sun, and it is said that its walls are those of that ancient edifice. It is also related that the altar stands upon the very spot where the golden image of the orb was adored. Pinkerton remarks that "a nunnery now stands on the situation, where lived the virgins of the sun."

HISTORY OF THE MASTODON RACE.



S far as is known at present, the whole race of mastodons is extinct. There is no evidence of their existence at this day. But the numerous remains of them found in this country, indicate that they have at some period lived in great numbers on this continent. At what time this was, we shall consider hereafter. Their range, however, does not appear to have extended over the whole of North America, but to have been confined mostly to the rich alluvial valleys. Portions of two skeletons only have been found north of Orange county in the state of New York. East of the Hudson river, portions of two have been discovered. Orange county, however, seems to have been the northern limit of their range, and the Hudson river the eastern boundary. Passing then south through New Jersey, and thence westward through all the great western valleys, throughout this whole region the bones are found in greater or less abundance. The saltlicks of Kentucky have furnished the most of these remains; and it has been stated, that from one of these localities alone, portions of more than one hundred skeletons have been removed. This species of mastodon is peculiar to this continent, no remains of it having been found in any other portion of the globe.

The first bones and teeth of this animal were found as early as 1812, at Albany; and were noticed in the philosophical transactions, in a letter from Dr. Mather to Dr. Woodward. In 1739, a French officer, by the name Longueuil, discovered some of the bones, teeth, and tusks, near the Ohio river; and the next year, larger quantities of similar bones were washed up by the current of the same river. After this time the bones were occasionally found, down to the present, but often very much decayed, and never in sufficient quantities to make an entire skeleton. The scientific world is much indebted to the

late Mr. Peale, who, with great labor and at much expense, procured, in 1800, sufficient bones to enable him to construct a tolerably complete skeleton, which is now in the Philadelphia Museum.

But though the living animal is unknown to us, the aboriginal inhabitants of this country seem to have been acquainted with them. Many people are disposed to place very little dependence upon Indian tradition; but however vague such tradition may become in relation to particular facts, by long transmission from generation to generation, yet it must have something real and true for its origin. Such we believe to be the fact in relation to this animal. We shall, therefore, give a few of these traditions as concisely as possible.

In President Jefferson's notes on Virginia, we find the following tradition of the Indians, in relation to this animal:—

"That in ancient times a herd of these tremendous animals came to the Big Bone Lick, and began a universal destruction of the bear, deer, elk, buffaloes, and other animals, which had been created for the use of the Indians.

"And that the Great Man above, looking down, and seeing this, was so enraged, that he seized his lightning, descended on the earth, and seated himself on a neighboring mountain, on a certain mountain rock, where the print of his feet are still remaining, whence he hurled his bolts among them, till the whole were slaughtered, except the big bull, who, presenting his forehead to the shafts, shook them off as they fell, but at length, one of them missing his head, glanced on his side, wounding him sufficiently to make him mad; whereon springing round, he bounded over the Ohio at a leap, then over the Wabash at another, the Illinois at a third, and a fourth leap over the great lakes, where he is living at this day."

A Mr. Stanley, who was taken prisoner by the Indians, and carried beyond the western mountains to where a river runs westward, says that these bones abound there, "and that the natives described to him the animal to which these belonged, as still living in the northern parts of their country."

The following we extract from Dr.

Koch's pamphlet on the Missouri: "One man, in 1816, has asserted that his grandfather told him that he saw one of these animals in a mountain pass when he was hunting; and that on hearing its roar, which he compared to thunder, the sight almost left his eyes, and his heart became as small as an infant's."

The opinion is a very prevalent one, that these animals were antediluvian, and most persons reject with a sneer the idea that they have lived at a very recent period. But the first has no ground or shadow of ground for belief, and all the evidence seems to show that they have existed not many centuries since.

Mr. Jefferson, in his notes on Virginia, reasons thus: "It may be asked why I insert the mammoth as if it still existed? I ask, in return, why I should omit it as if it did not exist? The northern and western parts still remain in their aboriginal state, unexplored and undisturbed by us, or by others for us. He may as well exist there now as he did formerly, where we find his bones," &c. The same reasoning which he used will apply, with a diminished force it is true, to our own times. There are still vast portions of this continent yet unexplored by the white man, and inhabited only by hostile Indian tribes. Vast gorges of the mountains in the west might still contain the living animal, and yet we be utterly ignorant of his existence. But we will not contend for his present existence. We will examine briefly the evidence of his having lived within a very few centuries.

In the first place, the testimony of the Indians, but a few years back. They stated in the early part of this century, that this animal still lived north of the Missouri river. They called it "Pere du bœuf" (father of cattle). But how shall we reply to the question, if the animal has lived in these parts of the country within so short a time, why did not the early white settlers either see them or hear of them from the Indians? To this we answer, that after the discovery of this country, the settlements of it took place very slowly, and then was principally in those parts which have not apparently been in the track of the mastodons. That they did not hear of them from the Indians is

not wonderful, for there was nothing to excite inquiry with regard to them. If a bone of one had been found at that period, and thus inquiry started, doubtless something would have been ascertained far more distinctly than has since been learned.

That they were not antediluvian, is settled by the fact of their being found in a deposit of marl and peat, all of which has been formed in modern times, and which is still forming. Moreover the fact that the bones in the skeleton, from Orange county, are so fresh, containing a large portion of animal matter, and that the contents of the stomach and intestines were found unchanged apparently by time, is strong evidence that this individual has lived at a very recent period, and we may put down five hundred years ago as the most distant time at which he lived; and we are strongly inclined to the opinion, that if extinct now, they have not been extinct one hundred years in the western parts of this country.

CRETAN OR WALLACHIAN SHEEP.



Of all domestic animals, the sheep was one of the earliest if not the earliest that submitted to man; it has spread with him as he has spread, and is essentially dependent upon his care and protection. The varieties into which it has ramified are extremely numerous; in fact, each country has its own peculiar breeds; but these breeds are not specifically distinct from each other; they produce a fertile progeny, with the blended features of the parents.

The Cretan sheep is said to be common in Wallachia, Hungary, Austria, and the western parts of Asia. Like its relatives peculiar to Europe, it is very stupid, but at the same time vicious and unruly, and of amazing strength. Its horns are very large, spirally contorted, adding greatly to its striking and picturesque appearance.



Creten or Wallachian Sheep.

Its wool, if wool it could be called, differs materially in quality and texture from that of our breeds. Instead of being curly and matted, or felted into a mass, it is of great length, perfectly straight, close set, and beautifully fine, falling from the middle of the back on either side of the animal almost to the ground. On the face the hair is short and of a rusty black, on the body it is white. To this description it may be added, that the horns of the male mostly rise almost perpendicularly from the skull, making a series of spiral turns in their ascent, the first turn being the largest, while in the female they diverge, taking a lateral direction. In the specimen, however, to which we allude, and which is a male, they extend laterally from the skull, and after the first turn take a downward sweep. It is probable, therefore, that as far as this point is concerned, there is a certain degree of individual variation among the breed, as indeed might be expected, seeing as we do how unfixed are all the external characters of our well-known domestic races, and how soon they are capable of being modified.

According to Belon the present variety occurs in Crete, it appears to have been known in ancient times, and is considered by some to be alluded to both by Oppian and Pliny. With respect to the latter writer, this is very doubtful. In the eleventh book (cap. xlv.) he alludes to an animal called *strepsiceros*, the horns of which were erect, and wound round by a spiral wreath of rugæ, lyre-shaped and pointed; this animal, he adds, is called Addax in Africa. It is doubtless an antelope.

Buffon, in the third volume of the supplement to his work, gives a figure of the male and female of this curious race, from a drawing sent to him by Mr. Collinson, of London, from whom he was in the habit of receiving many communications, but he obtained no information connected with their history.

No animal can be more unlike the Sardinian Mouflon than the Cretan or Wallachian sheep, and if that animal be indeed the origin of our domestic breeds, it proves to what an extent the modifications of physical structure may be carried by the arts of man and a combination of causes. The Mouflon is covered with coarse brit-

tle hairs, having nothing of wool in their character; yet as early as history carries us back, has the sheep been celebrated as a wool-bearing animal; and though its wool becomes lost in hot climates, such is not the case in the countries where the Mouflon now exists. The Mouflon, wild, active, and vigorous, tenants the craggy summits of the rocky mountains in Sardinia, Corsica, and some of the Greek islands. It is also abundant in the mountain ranges of southern Siberia, where it is subject to a cold rather than to a temperate climate; everywhere, however, it preserves its own characters without alteration, while in its domesticated and degenerate descendants, if such they be, which has yet to be proved, we see a perpetual series of variations, a multitude of breeds presenting diverse characters, but all of greater or less value to man, on whose care and protection they all equally rely.

JULY.



JULY, so named in compliment to the great Roman commander, was called by the Saxons *Hey-Monath*, or the season of hay harvest.

As January is the coldest, July is the hottest, month of the year. The direct influence of the sun, indeed, is continually diminishing after the summer-solstice; but the earth and air have been so thoroughly heated, that the warmth which they retain more than compensates, for a time, the diminution of solar rays. The effects of this weather upon the face of nature soon become manifest. All the flowers of the former month diminish in beauty, shrivel, and fall; at the same time their leaves and stalks lose their verdure, and the whole plant hastens to decay. Many plants, however, do not begin to flower till July: these are, particularly, the aromatic, the succulent, or thick-leaved, several of the aquatic, and of those called

compound-flowered, in which many florets are collected into one head, as the thistle, sowthistle, hawkweed, &c. The lily is one of the principal ornaments of gardens in this month; and, with its delicate white flowers, gives an agreeable sensation of coolness to the eye.

The animal creation seem oppressed with languor during this hot season, and either seek the recesses of woods, or resort to pools and streams, to cool their bodies and quench their thirst.

The insect tribe, however, are peculiarly active and vigorous in the hottest weather. These minute creatures are for the most part annual, being hatched in the spring, and dying at the approach of winter: they have therefore no time to lose in indolence, but must make the most of their short existence; especially as their most perfect state continues only during a part of their lives. All insects undergo three changes, in each of which they are transformed to a totally different appearance. From the egg, they first turn into caterpillars or maggots, when they crawl upon many feet, and are extremely voracious; many kinds of them doing much mischief in the gardens, and sometimes devouring the leaves of the trees, and even the herbage on the ground. This is their state in the spring. They next become *aurelias*, or *chrysalides*, when they resemble an infant closely wrapt in swaddling clothes, being motionless, taking no nourishment, and, indeed, having no appearance of living creatures. From this state they burst forth into the perfect insect, shining in all its colors, furnished with wings, full of activity, capable of propagating its species, and feeding, for the most part, on thin liquid aliments, such as the honey of flowers and juices of animals. Most of them continue thus but a short time. The male impregnates the female; she lays her eggs; and they both die.

This is a favorite season for the entomologist. Large copper and other butterflies are very active during this period—the large tiger and lacky moths are also to be found.

The luxury of cooling shades is now peculiarly grateful; and, indeed, is scarcely desired in this climate longer than a few weeks at the height of summer.

" Welcome, ye shades! ye bowery thickets, hail;
Ye lofty pines! ye venerable oaks;
Ye ashes wild, resounding o'er the steep;
Delicious is your shelter to the soul.
As to the hunted hart the sallying spring."

THOMSON.

Bathing, too, is a delightful amusement at this season; and happy is the swimmer who is able to enjoy the full pleasure of this healthful exercise. The power of habit to improve the natural faculties is in nothing more apparent than in the art of swimming. Man, without practice, is utterly unable to support himself in the water. In these northern countries, the pleasant bathing being short, few in proportion can swim at all; and even to those who have acquired the art, it is a laborious and fatiguing exercise. Whereas, in the tropical countries, where from their very infancy both sexes are continually plunging into the water, they become a sort of amphibious creatures, swimming and diving with the utmost ease, and for hours together, without intermission.

The excessive heats of this period of the year cause such an evaporation from the surface of the earth and waters, that, after some continuance of dry weather, large heavy clouds are formed, which at length let fall their collected fluid in extremely copious showers, and these frequently beat down the full-grown grain, and sometimes deluge the country with sudden floods. Thunder and lightning generally accompany these summer storms. Lightning is a collection of electric fire drawn from the heated air and earth, and accumulated in the clouds, which, at length overcharged, suddenly let go their contents in the form of broad flashes or fiery darts. These are attracted again by the earth, and often intercepted by buildings, trees, and other elevated objects, which are shattered by the shock. Thunder is the noise occasioned by the explosion, and therefore always follows the lightning; the sound travelling slower to our ears than the light to our eyes. Just the same thing happens when a gun is fired, at a distance. When we hear the thunder, therefore, all danger from that flash of lightning is over; and thunder, though so awful and tremendous to the ear, is of itself entirely harmless.

The effects of the great heat on the human body are agreeably allayed by the various wholesome fruits which Providence offers at this season for the use of man. Those which are now ripe are of all the most cooling and refreshing; as currants, gooseberries, raspberries, strawberries, and cherries. These are no less salutary and useful, than the richest products of the warmer climates.

Fowls moult, or lose their feathers, during this month. The smaller birds do not moult so early; but all renew their plumage before winter, when they are in their finest and warmest clothing.

THE NELSON MONUMENT, YARMOUTH.



THE Nelson monument at Yarmouth is a fluted column, 130 feet in height, erected on the South Denes, between the barracks and the mouth of the haven. The monument may be distinguished at sea by the distant mariner: there would scarcely be a more appropriate landmark. In the foundation-stone a plate was placed, on which was engraved an inscription in Latin. It is so rarely that these compositions are calculated to touch the heart and imagination, that their absence is scarcely to be regretted. Their brevity at least would be deserving of commendation. Unless, however, there exist popular sentiments shared in by all ranks, from the palace to the fisherman's cabin, it is in vain that even monuments are raised, for they can excite no adequate and appropriate interest. The truest fame is that which gives feeling of pride to the humblest man, who thus feels himself a partaker in it. It is this which strengthens the heart of a nation, nerves it in the hour of danger, and gives that confidence which leads to actions in which feelings of self-vanish, and men become heroic, whether it be on the field of battle or in civil contests. A monument which cherishes high

feelings of honor and public virtue among all classes, without exciting their fanaticism, may truly be termed national.

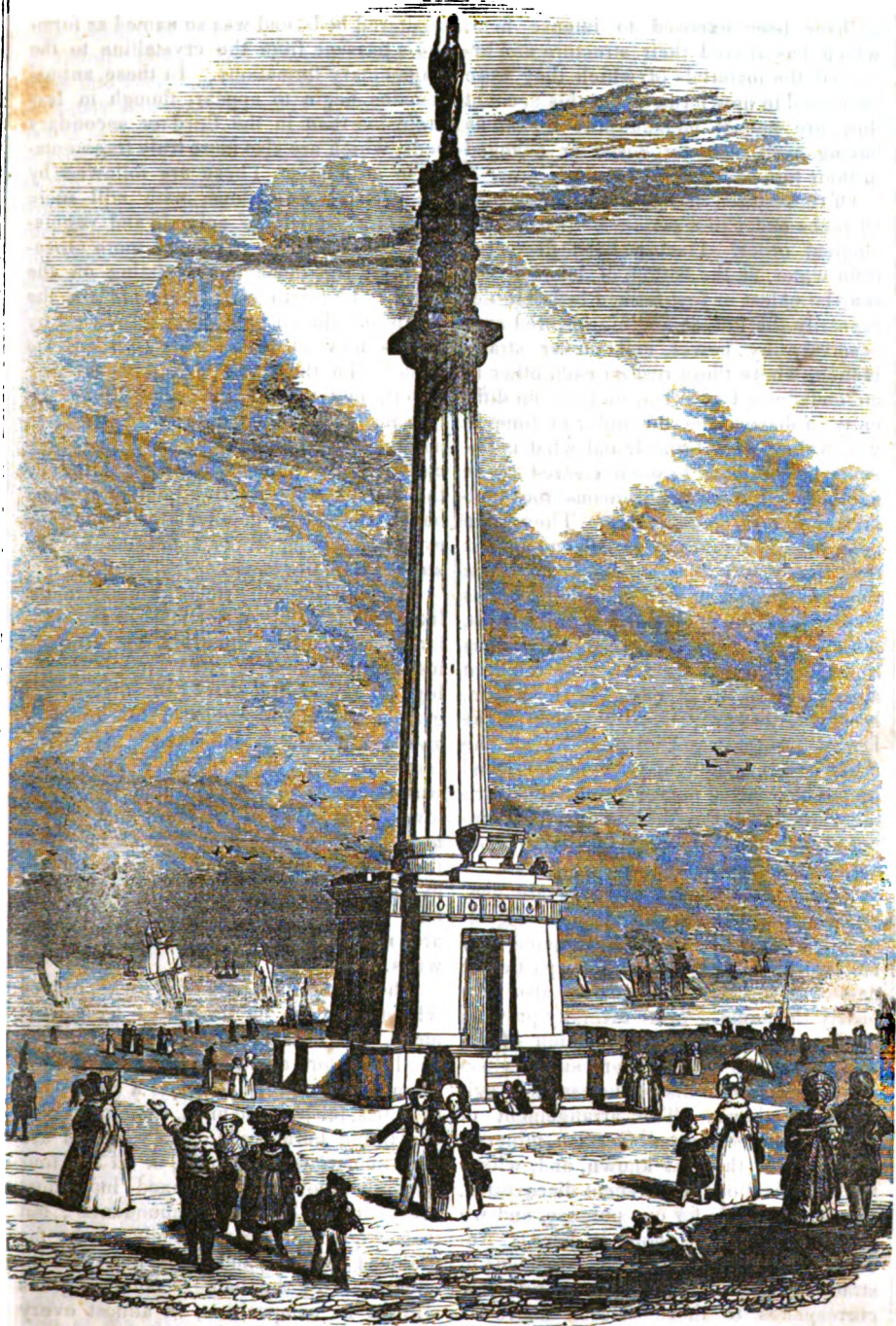
CLASSIFICATION OF ROCKS.

PRIMARY FORMATIONS.



HERE are two principles on which the classification of the rocks composing the crust of the earth may proceed. In the one they are regarded as mineral compounds, and arranged according to the similarity of their composition and physical properties. In the other, they are viewed as produced at successive periods, and classed according to their age. The latter is evidently best adapted to geology, considered as a history of the earth and of those revolutions it has undergone, and is now generally adopted in all cases where the relative age of the various formations can be determined. This, however, is not always the case, when the former must be chosen, and the rocks named simply as mineral compounds.

Some rocks are stratified, or divided into beds of great length and breadth compared to their thickness; others formed irregular masses of no determinate shape. This is the foundation of the first great division of rocks into stratified and unstratified; the former supposed to have been deposited from water, the latter to have been produced by igneous agency. Some rocks, it also appeared, were crystalline in their structure, others uncrystalline, and composed of fragments. Dividing the rocks on this principle, the classification is found nearly to correspond with the former; the igneous or massive rocks having in general a crystalline structure, the stratified being, on the other hand, mostly fragmentary. There is, however, a class of rocks participating in both characters, being stratified in form but crystalline in structure. These are supposed to have been originally strata consisting of fragments like the others, but



Monument to Nelson, Yarmouth.

to have been exposed to intense heat, which has altered their structure and arranged the materials of which they were composed in new forms. On this account they are named metamorphic rocks, as having been metamorphosed or changed in their forms.

Of these three classes, only the stratified rocks occur in a certain known chronological order. Having been deposited from water, at the bottom of lakes or the sea, the oldest or first-formed beds are necessarily the lowest, and are covered successively by newer and newer strata. Hence, where these rest on each other in an undisturbed position, there is no difficulty in discovering the order of time in which they were formed, and what is obscure in one place is often cleared up in another. But in the igneous rocks no such order is discoverable. They have been produced in every period, and exhibit few, if any, certain marks by which their relative age can be determined. This is also true of the metamorphic formations, which have been produced at various times, and from strata of very different ages. From their mode of formation, however, they are usually found in the lowest position, and covered by all the other strata which may be present, and hence have been named primitive or primary rocks by the Wernerians, and supposed to constitute part of the original structure of the globe.

These three classes of rocks are generally distinguished in all systems of geology. The varieties of the igneous and metamorphic rocks, to which particular names have been assigned, are also very nearly the same. More diversity prevails in the division and classification of the stratified rocks, almost every author altering the system of his predecessors to suit his own views. The arrangement of Werner, the celebrated German mineralogist, is still the best known, and, with a few modifications from recent discoveries, the most suitable for our purpose, and we shall consequently adopt it here. According to this, there are five divisions of stratified rocks. The first, or primary, corresponds to those classed above as metamorphic. The second division, or the transition rocks, includes the oldest

unaltered beds, and was so named as forming a passage from the crystalline to the fragmentary formations. In these, animal remains begin to appear, though in less profusion than in the third or secondary beds, which are also more truly fragmentary in structure. These are followed by the tertiary formations, with still more abundant remains of animals and vegetables, belonging also to species more closely allied to those now existing on the earth. The fifth and last class are the recent or alluvial formations, produced by causes now in actual operation on the globe. To these we shall successively advert, noticing, at the same time, the igneous rocks connected with them in nature. Though it might seem more scientific to have described the latter by themselves, yet this arrangement appears better adapted for popular illustration, and even for giving correct notions of the structure of the earth.

In examining a district of primary rocks, like the Highlands of Scotland, or the similar parts of other countries, an arrangement of this kind is often seen. In the highest and central part of the district are granite mountains, enclosed by zones of gneiss, quartz rock, mica-slate, clay-slate, limestone, and other primary strata. It was at one time believed that these followed each other in the order now stated, but further investigation has shown that, though very common, this arrangement is by no means invariable. The order is not only reserved, but the rocks alternate or are mixed with each other in various ways.

The mineral characters of rocks, unless where they can be illustrated by specimens, are not very interesting, and we shall therefore avoid entering into details. Granite, as formerly stated, is a compound of quartz, felspar, and mica, sometimes also containing hornblende. Its varieties are very numerous, two, three, or all the four minerals above, being mixed in almost every degree of relative abundance; but that of quartz, felspar, and mica, is by far the most common, and is that most usually understood by this name. Gneiss agrees with it in composition, in almost every respect, but is divided into beds or strata, and has often a slaty structure. Mica-

slate consists of quartz and mica, arranged in distinct layers, and, consequently, divides into very thin beds, which are often curiously bent and contorted. Sometimes quartz is found alone, composing quartzite or quartz-rock. Clay-slate is well known as the common roofing slate with which houses are covered. Limestone is not very abundant, but is remarkable as furnishing the various statuary and ornamental marbles of commerce, the former being pure white, the latter various shades of gray, yellow, green, red, or black. With these rocks, other beds of less importance occasionally occur, which it is unnecessary to mention.

The manner in which these rocks have been formed has given rise to much controversy, and the theory of them stated above is only partially received. Werner supposed that the whole materials of this globe were originally dissolved in the waters of a primeval ocean, which gradually deposited the various substances it contained. First of all, the granite rocks were thrown down in vast beds extending over the whole globe. Then the gneiss followed, succeeded in turn by mica-slate, clay-slate, and the other primary formations, investing the earth in successive shells, almost like the coats of an onion. His opponents soon pointed out the inconsistency of this theory with facts, and the impossibility of finding a mass of water capable of dissolving these rocks, and his aqueous chaos is now almost forgotten. Some, however, seem inclined to put an igneous one in its place. They affirm that the solar system was originally a nebula, like one of those which astronomers still observe in the heavens. That it was then a mass of intensely-heated vapor, which, cooling down, condensed and threw off the various planets which surround the sun; that the earth was then a fluid mass of molten rocks, and thus acquired its present form; continuing, however, to cool, first the granite rocks, and next the gneiss, with its associated beds, formed on the surface, while the interior, still retaining its heat and fluidity, produces earthquakes and volcanoes, with changes in the elevation of the land, and dislocations in the strata, by contracting as it cools still more. This theory is supported by many ingeni-

ous analogies in astronomy, but only its geological bearing can be here considered.

Dr. James Hutton, a singular, eccentric, but profound philosopher, who lived in Edinburgh in the end of the last century, has the merit of proposing the true theory of these rocks. He considered that granite was an igneous production, similar to lava, but differing from this in consequence of having been formed in the interior of the earth, below other rocks, and not like the latter on the surface. He also thought that many of the peculiarities in the primary beds were owing to their being in contact with this rock, which had hardened them and given them their crystalline aspect. He had long looked for some confirmation of this opinion in nature, but geology then was little understood in Scotland, and no description of its rocks, or the places where they were found, existed. At last, when on a visit in Perthshire, he examined the phenomena of Glen Tilt, a wild romantic glen which runs down from the central mountains of the Grampians to the valley of the Garry at Blair-Athol. The hills on the southeast side of the Tilt consist of quartz rock, mixed near the bottom with limestone, while on the northeast are granite mountains. Here Hutton found what he had long looked for, veins of granite running into the strata above, and was so delighted with this confirmation of his speculations as to shout loud for joy, so that his companions thought him out of his senses. In Glen Tilt the changes on the stratified rocks near the granite are very interesting, and fully confirm the Huttonian view of their origin. There seems little doubt that the marble, of green, yellow, white, or gray colors, quarried near the foot of this glen, is only a limestone altered by the vicinity of the igneous rocks. Even the fine white statuary marble of Carrara is now known to be a recent limestone changed by heat. The quarries lie in a wild desolate valley, at some distance from the town, on the western declivity of the Apennines; and the marble has probably been produced by the igneous agency elevating these mountains. In many other places, similar rocks, once believed to be the oldest on the earth, are found to have been formed at a period which, geologically considered, is very

recent. Thus the mica-slate forming Mont Blanc, the monarch of European mountains, changes gradually into a rock newer than the coal strata round Edinburgh, and this giant hill is probably more recently formed than the diminutive Arthur Seat. There is thus, therefore, no ground for considering them as portions of the original structure of the globe, at least in their present condition.

These rocks are found, almost with the same characters, over nearly the whole earth, and from its lowest plains to the summits of its highest mountains. In Europe, they have been traced from Finland and the North Cape to the mountains of Spain and Greece, on one hand, and, on the other, from the western isles of Scotland to the far distant Urals on the borders of Asia. Humboldt found them in the mountains of South America, and in North America they are seen encircling the great Canadian lakes and the still more vast basin of the Mississippi and Missouri. They form the extreme south of both the old and new continents in the cape of Good Hope and Terra del Fuego. In Asia, they are not less dominant from Siberia and the Altai mountains to the lofty chain of the Himalaya.

The character these rocks impress on the scenery is often very diverse, but in all a species of harsh rugged grandeur prevails. Each rock formation has its own peculiar character, arising from its nature and mode of decomposition, and is also favorable to the growth of certain plants and trees, which form as it were its appropriate clothing. There is a harmony prevailing throughout nature, and all its various kingdoms, which show it to be the work of infinite goodness and intelligence. Not only are the various parts of the material world beautifully adapted to each other, but also fitted to inspire the mind of man with those elevated emotions which constitute his truest and most lasting enjoyments.

But these rocks possess other recommendations, in the rich mines they contain and the valuable gems or precious stones found in them. The rock-crystal of the Cairngorm mountains was at one time in great reputation as an ornamental stone; and the amethyst, topaz, and some

others, more rarely occurred. Garnets of various sizes are common everywhere in the mica-slate, but are too abundant to have much value. In Brazil, this rock contains diamonds, more commonly, however, found in the debris or fragments near primary mountains. The emerald of Peru, the ruby, and corundum, seem to be derived principally from the granite, but, for obvious reasons, are more frequently sought for among the gravel formed by its decay. Less attractive, but more valuable, are the mines for which these rocks are justly celebrated. The granite of Cornwall contains those stores of tin which drew to its shores Phœnician merchants, centuries before the Roman legions had crossed the channel. In Sweden, the gneiss contains the richest mines of copper and iron. Gold and silver are also found in it in that land, but in less abundance than in the Ural chain which bounds the eastern side of the great plain of northern Europe. From the mines in these mountains, and in Siberia, the Russian government has obtained, in the twenty years before 1842, about 250,000 lbs troy of gold, besides silver and platinum. But the expense, even in that country, where labor costs little, is enormous, and the profit far less than might be imagined. The rich mines of America are also in similar rocks, where igneous formations have disturbed and altered the regular beds.

A speculative author of the seventeenth century maintained that the original form of the earth was a great plain, hills and mountains being the effects of that curse pronounced on the ground for the sin of man. This notion could only have originated in the mind of a native of a level country, who knew little of the true economy of nature. To an eye accustomed to a mountain land, few objects are more tiresome than a great extent of level ground with no inequalities, and such regions are seldom so fertile as those of more varied outline. In like manner, the igneous rocks, with the disruption, confusion, and alteration, they produce on the connected beds, have been looked on as inconsistent with a system of perfect wisdom and beneficence. Yet this view undoubtedly arises merely from our ignorance and partial

knowledge of the innumerable relations subsisting among the various portions of the universe. So far as we do see, we can perceive that this irregularity is productive of beauty and a higher harmony ; that these igneous rocks decompose into a rich and fertile soil ; and that these convulsions promote the natural drainage of the land, so essential to its salubrity, and give rise to springs, as these, by their union, to brooks and rivers ; while the rocks in which change and alteration are most evident, are the most prolific of those minerals on which so much of the comfort and happiness of men depend. It is indeed rarely safe for man to propose amendments in that system which Infinite Wisdom has adopted.

CICERO.



HE concurrent testimony of ancient and modern times has placed Demosthenes and Cicero side by side as the two great masters of ancient oratory, each eminent beyond comparison, in his own style, in his own tongue, and above his own countrymen. Each of them, by that brilliant talent, was introduced, from stations comparatively humble, to the highest office and honors which they could enjoy, and each has thus won an imperishable name. Demosthenes, however, is eminent only as a public man ; Cicero is no less distinguished as a philosopher and man of letters than as a speaker and statesman.

Marcus Tullius Cicero was born at Arpinum, a small inland town of the province of Latium, about 68 miles east of Rome, in the 648th year after the foundation of the city, and the 106th before the birth of Christ. He was of very ancient, but not of patrician family. Both his grandfather and father were men of talent, possessed of influence in their neighborhood ; and the father in particular was intimate with many leading men of his day. Bad health however compelled him to live in retirement, which he em-

ployed in cultivating the talents of his two sons, Marcus and Quintus, who had in addition the ablest instruction which Rome could afford. Oratory, the Roman law, and the Greek language, literature, and philosophy, were the principal branches of the future statesman's study. As an amusement, both at this time and later in life, he practised composition in verse ; and he appears to have regarded his efforts with some complacency. None of them however are preserved ; and to judge from the extracts which remain in Cicero's prose writings, the loss has not detracted from his reputation. The warlike constitution of republican Rome required that all her citizens should be trained to arms ; and it was in compliance with the law, and not from any turn for the military profession, that at the age of 17, B. C. 89, and in the following year, Cicero served in the Marsic war. This however was but a short interruption to his laborious course of preparation for the bar, to which he steadily applied throughout the bloody civil war of Marius and Sylla. In addition to his professional studies he attended diligently the lectures of those Greek philosophers who visited Rome, and practised declamation in Greek as well as in Latin. He first appeared as an advocate, at the age of 26, B. C. 81 ; to which year belongs his earliest extant speech in defence of Quinctius. In the following year he defended Sextus Roscius from a charge of parricide ; and obtained, according to his own report, by his speech on this occasion, which is preserved, a place among the first orators of Rome. He gained the cause ; and his exertions in this case were the more honorable, because the prosecution was abetted, for private reasons, by the unscrupulous and all-powerful dictator Sylla. Soon afterward a prudential care of his health, which in youth was delicate, not unconnected probably with the apprehension of Sylla's resentment, induced him to undertake a tour in Greece and Asia, which filled up two years. During this period, however, he continued the study of philosophy and oratory, frequenting the schools of the most eminent masters wheresoever he went, both with applause and advantage. B. C. 67, after the death of Sylla, he returned to Rome.



Cicero, from an Antique Bust.

Of mature age and highly-cultivated talents, he now applied his whole mind to the practice of the law, through which he looked to attain power and dignity. The profession of an advocate at Rome was different in many respects from that of a barrister of our times; there was no body of men set apart, and called to the bar; but a client chose his advocate from the learned, or the powerful, or the eloquent, and the courts were open to the advocacy of all alike. Such services were gratuitous, for in the republican times it was disgraceful to accept money for pleading a cause: still the profit of an advocate in large practice, though indirect, was certain, especially if he looked forward to advancement in public life, to which the power of conferring obligations on a great many persons, and at the same time of displaying talents for business, very mainly contributed. It was necessary for those who aspired to the highest offices of the state to pass in rotation, with certain intervals between the holding of each office, through those of inferior dignity; and in the second year after his return, B. C. 75, he obtained the lowest of them, being made one of the *quæstors*. These were a set of officers, who had various duties, principally connected with the collection and administration of the revenue, both at Rome and in the provinces: Cicero was sent into Sicily, where he discharged his functions with usefulness and honor. He thought that his services, even in this subordinate station, could not fail to command attention: but being disappointed in this, finding that his absence had passed unnoticed, and that the people, in his own words, had dull ears, but quick eyes, he resolved thenceforward to remain at Rome, and to apply himself still more closely to the business of the forum, even to the relinquishment of those provincial governments which were the most lucrative situations that the republic had to bestow.

During the next five years Cicero's life was spent in the quiet practice of his profession: but none of his speeches during this period have been preserved, except the series in accusation of Verres, late governor of Sicily, a man infamous for extortion and cruelty. Cicero was

not fond in general of acting the part of an accuser; but his connexion with Sicily seemed to enforce the claim of the province on his services. Verres was supported by the powerful influence of an oligarchy interested in screening abuses by which they had themselves profited or hoped to profit; but the case against him was so strong that in an early stage of the proceedings he went into exile, rather than encounter the full exposure of his misdeeds consequent upon a public trial. Of the seven orations on this subject, therefore, two only (those entitled *Divinatio* and *Actio prima*) were spoken; the others, however, are finished, as if for delivery.

B. C. 69, Cicero filled the office of *ædile*; and B. C. 66, that of *prætor*. At the close of the latter he declined, according to his resolution above noticed, to take a provincial government, which magistrates usually looked to as the means of repaying with interest the enormous sums which were usually spent in gaining an election, either in direct or indirect bribery. His views no doubt were directed to the speedy attainment of his highest object of ambition, the consulship; still, as his fortune was small, and rendered adequate to the support of his rank and dignity only by a strict economy, his moderation in this respect is honorable.

In the summer of the year 64 B. C., Cicero became a candidate for the consulship, and having gained his election, entered with the new year upon the duties of his office. The state of Rome at this time was very critical. An extensive plot was organized, not to change, but rather to subvert the constitution, by the entire destruction of the party in possession of the good things of the state, and the transfer of both their political influence and private wealth to other hands. At the head of this plot was Lucius Sergius Catilina, a man known and feared, of an illustrious family, but ruined alike in fortune and character, and fitted for the desperate course into which he had now plunged, by a brain fitted to contrive, and a hand and tongue to carry through, the most daring and atrocious design. His chief supporters were men similarly situated, of high rank, expensive and profligate habits, and neither fortune nor expecta-

tions, except in the lottery of public life ; in short, it was a sort of Cato street conspiracy, except that the actors were of the highest, instead of the lowest class. In Rome, it would appear, from the caution considered necessary in dealing with the conspirators, that a large proportion of the physical force of the metropolis must have been well inclined to assist their views. These were, to murder the consuls and those senators whose character and talents were to be feared ; to set fire to the city, and in the confusion to seize the capital, and gain possession of the seat and ensigns of the government. The support of a large body of soldiers, trained to bloodshed in the wars of Marius and Sylla, and settled upon grants of land in different parts of Italy, was readily promised to men who held out the prospect of further benefit from civil strife. Not only the existence of the plot, but full particulars of its progress were made known to Cicero through private channels of information ; but it was found very difficult to obtain legal evidence to convict the actors. Catiline, though the matter was generally notorious, maintained the bold front of innocence ; and even appeared in the senate on the 8th of November. Provoked at this effrontery, Cicero burst out in what appears to have been an unpremeditated invective against him—the first oration against Catiline. In this he exposes the vices of Catiline's life, goes into the detail of his past and future schemes, and urges him to depart into exile, or repair to his associates, and begin the civil war which he had resolved ; and he explains the lenity or seeming weakness of his own conduct, in opening the door of escape to such a criminal, on the ground that many could not or would not see the impending danger. If, he argued on the other hand, the chief criminal be once driven into open rebellion : “ none can be so silly as not to see there is a plot, none so wicked as not to acknowledge it ; whereas, by taking off him alone, though this pestilence would be somewhat checked, it could not be suppressed ; but when he has thrown himself into rebellion, and carried out his friends along with him, and drawn together the profligate and desperate from all parts of the empire, not only this ripen-

ed plague of the republic, but the very root and seed of all our evils will be extirpated with him at once.” He concluded with a grand burst of indignation against Catiline, who, though startled at this open attack, rose to defend himself, but was overpowered by the general outcry of the senate. He exclaimed, in fury, “ Since I am thus entrapped and driven headlong by my enemies, I will extinguish the flame raised about me by the common ruin,” and rushing out of the senate-house, quitted Rome that evening, and made all haste into Tuscany, where the discontented soldiery were already in motion.

This open step removed one portion of Cicero's difficulties ; and fresh evidence being obtained, the principal conspirators who remained in Rome were arrested. To bring them to an open trial, or to retain them in custody, was alike thought unsafe, on account of the danger of a rescue ; and the question of their fate was remitted by the consuls to the senate. It was determined, chiefly through Cicero's eloquence, that they should forthwith be put to death ; an illegal act, to be justified only by that extreme necessity which overrules all law. The fourth and last Catilinarian oration is on this subject. In the evening Cicero was conducted to his own house by the senate in a sort of triumph, while the people thronged the way, saluting him with acclamations as the savior and second founder of Rome. These important transactions took place on the fifth (the *Nones*, according to the Roman calendar) of December, to which Cicero continually refers as the most glorious epoch of his life.

After his elevation to the consulship, a decided change is to be traced in Cicero's political feelings and conduct. For his promotion he had depended on the democratic elements of the constitution ; having gained it, it became his object to secure the good-will, and to identify his own interests with those of the senate and nobility. In this he never completely succeeded. There was always a prejudice against him as a *new man*, that is, one who had no hereditary honors to boast ; and the eminent service which he had done was rendered distasteful and almost ridiculous by his constant reference to it

in public and private, and by his overweening vanity and egotism. When the time of need came, he experienced the lukewarmness of his new friends. There was one Clodius, a dissolute young patrician, in whose prosecution for a gross violation of religion and public decency Cicero had been concerned. Clodius became his mortal enemy; and being supported for party purposes by Cæsar and Pompey, he procured the enactment of a law by which any one who had taken the life of a citizen uncondemned and without trial should be interdicted from fire and water, a phrase equivalent to outlawry and excommunication combined. This was manifestly aimed against Cicero, who by the advice of his friends withdrew into a voluntary exile, in March, B. C. 58; and shortly after his departure a law was passed forbidding him to appear within 400 miles of the capital. He took up his abode in Greece. No part of his life is less dignified than this: short as it proved, his downfall overwhelmed him with grief; and he so far lost the control of his feelings and conduct, that his mind was even supposed for a time to be disordered. His exile however did not last for a year and a half, a law having been carried, after much opposition, to authorize his return. He was received with extraordinary honors; his whole journey through Italy resembled a triumphal procession, and his entry into Rome was attended with still greater honors. "That one day," he says, "was worth an immortality; when on my approach toward the city, the senate came out to receive me, followed by the whole body of the citizens, as if Rome itself had left its foundations, and marched forward to embrace its preserver."

We can not number among Cicero's good qualities the strength of principle and moral courage which are the only security for honest and consistent conduct in stormy times. He had experienced the ill effects of provoking the powerful, and had no time to be made a martyr a second time. Hence we find him connected sometimes with Pompey, sometimes with Cæsar; ill at ease, as is evident from his correspondence, with the state of public affairs, and seldom satisfied with his own conduct. We abstain from

attempting to conduct the reader through the tortuous maze of Roman politics; in which, for some years, Cicero ceased to take a leading part. He still continued the frequent exercise of his rhetorical talents in defence of accused persons, and applied his leisure hours to the study of philosophy and the composition of his philosophical writings.

B. C. 51, Cicero was obliged, by an alteration of the law, to take the government of a province, which he had hitherto declined. Cilicia fell to his share. It had been greatly pillaged by the preceding governor; and Cicero found abundant employment in healing the disorders which his predecessor had caused. The military transactions of his proconsulship were unimportant; though he would willingly have magnified some slight successes into ground for a triumph.

He returned to Rome in January, but just before the march of Cæsar into Italy. Reduced to the necessity of choosing between the party of that daring leader and the senate headed by Pompey, he hesitated, but took the side which consistency required him to adhere to. But when Pompey found it expedient to evacuate Italy and retreat into Greece, Cicero remained behind, and negotiated for a reconciliation with Cæsar, who required from him no more than neutrality. A temporary check to Cæsar's fortunes again revealed the real bent of Cicero's wishes: he escaped to Greece, and joined the army of Pompey. In the field, however, he was no acquisition. Discontented and dispirited, he vented his spleen in evil forebodings and bitter discouraging jests. After the battle of Pharsalia he lost all hope, and returned to Italy in October, B. C. 48; where, after remaining many months in suspense, he received from the conqueror the assurance of safety.

From this time to the death of Cæsar, B. C. 44, Cicero's political importance ceased; and he lived in retirement, chiefly employed in the composition of his philosophical works, of which these few years produced an ample harvest. Cæsar's murder brought him again into public life. In that act he had no hand, probably being regarded by the conspirators as too timid and undecided to be trusted in such a

cause. But he expressed his concurrence and joy after the deed was done; and lamented, more to the credit of his foresight than of this morality, that Antony had not been included in Cæsar's doom. To Antony he was inveterately hostile; and it was with the view of making him odious, and stimulating the senate and the people against him and his friends, that the famous series of orations, which, in imitation of Demosthenes, Cicero entitled his *Philippics*, was composed and spoken. His hopes, however, and those of his party, were finally destroyed by the formation of what is called the second triumvirate, the union of Octavius with Antony and Lepidus. The bond was sealed by a new proscription, as it was called, in which those who were obnoxious to the contracting parties were consigned by name to military execution. Octavius readily abandoned Cicero to the vengeance of Antony, whose hatred was strongly roused by the profuse invectives which the orator had lavished on him. The news reached him at his Tusculan villa, about ten miles from Rome. His first thought was to escape by sea; but being opposed by the winds, and fluctuating and uncertain in his resolutions, he landed again, and proceeded to his Formian villa, near Naples, where he was put to death, without resistance, by a party of soldiers, December 7, B. C. 43, at the age of 64. His head and hands were carried to Antony, who ordered them, according to Plutarch, to be set up in the Forum, above the rostrum or platform from which he had been used to address the people.

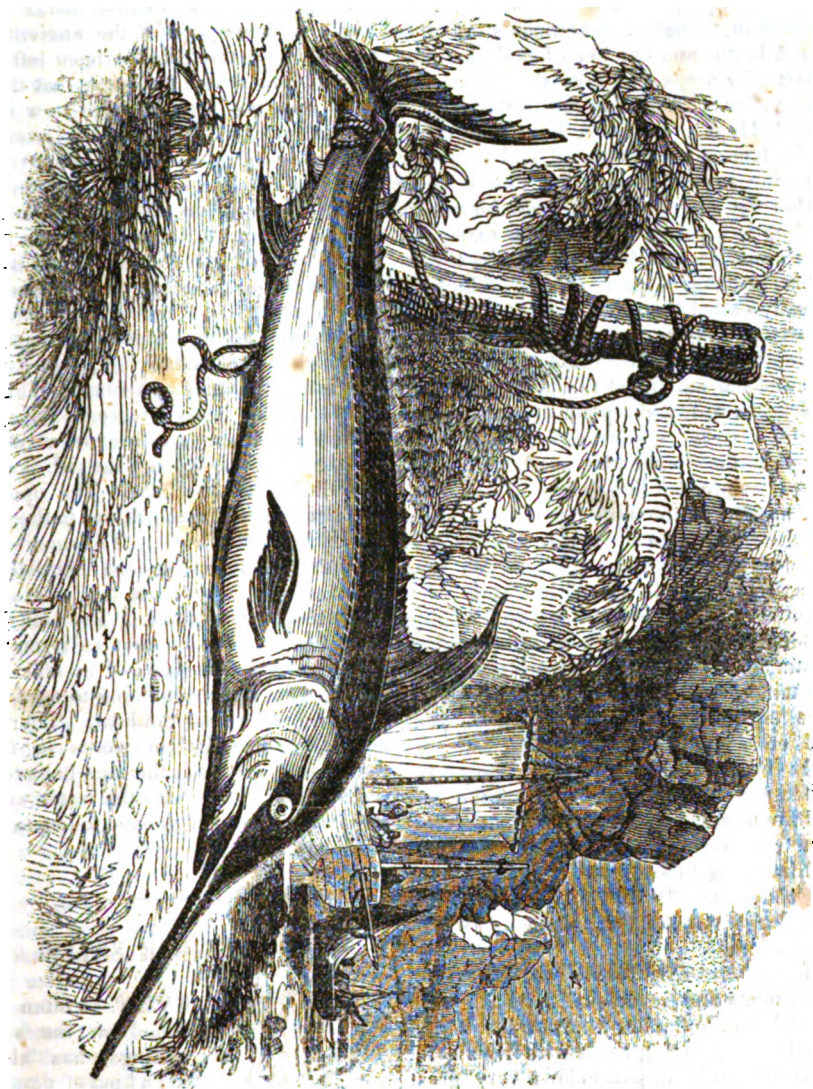
None of Cicero's historical, and only fragments of his poetical works remain: those which are extant of his writings are divisible into four heads: 1, On the science of rhetoric; 2, On religion and moral and political philosophy; 3, Orations; 4, Letters. It was his peculiar merit to have been the first who attempted to teach the Greek philosophy in the Latin language. The multiplicity and variety of his philosophical works, of which indeed the rhetorical ones form but a branch, is wonderful when we consider how busily his life was employed: the subject, however, is too extensive and of too little general interest for us to attempt

to analyze their contents. As a speaker, Cicero wants the conciseness and fire of Demosthenes; a necessary consequence perhaps of his having to deal with a language far inferior to that of Greece in copiousness, accuracy, and energy. In elegance, variety, and, above all, in the skill of the pleader, the power of making the best of his case according to circumstances, and adapting his arguments to the audience which he had to address, it would be hard to find his superior. His letters are most valuable helps to the history of his times, and make amends for the absence of a digested history from his pen, which would have been less minute and probably less veracious. They are written for the most part, especially those to Atticus, with great freedom; and exhibit his real opinions with little reserve. Many of the heaviest charges against Cicero's integrity as a public man are based upon his correspondence; and it is to be remembered, in comparing him with others, that few public men have given us the opportunity of subjecting their conduct to so severe a scrutiny. To his Latin style in all its variety, familiar, didactic, oratorical, too much praise can not be given. He has always been regarded as the model of Latin prose composition; and, indeed, about the time of the revival of letters was regarded with an almost slavish veneration: one school of Latinists refused to use even a word or phrase which had not the sanction of his authority.

SWORD-FISH.



HE prolonged bony snout of the swordfish, bearing some resemblance to a sword in its form and employment, has in all nations procured for the fish a name expressive of this analogy. The generic character common to the species is, that the head with the upper jaw terminates in a sword-shaped snout, that the mouth is without teeth, that the gill-membrane has



The Sword-Fish.

eight rays, and that the body is roundish and without scales. The two principal species are—the common sword-fish, and the broad-finned sword-fish. The common sword-fish (*xiphias gladius*) is considered as properly a native of the Mediterranean, though it sometimes strays into the Atlantic, and has been found along the coast of Europe as far as the Baltic, and along that of Africa as far as the cape of Good Hope. It has a long and round body, largest near the head, and gradually tapering toward the tail. The head is rather flat, and the mouth wide, both jaws ending in a point, but the upper extending to a much greater length than the lower. This prolonged part is that which is usually called the sword: it is of a bony substance between three and four inches wide at the base, according to the proportions of the individual to which it belongs, and tapering to a sharp point. It is covered by a strong epidermis or scarf skin, rough to the touch like sand paper. A deeply-impressed line or furrow runs down the middle of the upper part, and three similar furrows on the lower surface. It has only one fin on the back, which runs along the whole length of it. It is very high at the commencement, and sinking suddenly, becomes very shallow, and is continued to within a short distance of the tail, terminating in an elevated point. The tail is large and crescent-shaped, and on each side of the body, immediately before it, is a strong finny appendage. The general color of the fish is brown, accompanied by a deep steel-blue cast on the head and upper parts, and inclining to silvery white on the sides and abdomen. It sometimes grows to a very large size, and as much as twenty feet in length.

The sword-fish is very active in its movements and voracious in its appetite. It feeds on the smaller kinds of fish, which it kills by piercing them with its sword. It is said to be in particular a very great enemy to the tunny, which is described by Bolon to be as much alarmed by its appearance as a sheep is at the sight of a wolf.

This fish is highly esteemed as an article of food by the Sicilians, who buy it up eagerly at any price at the commence-

ment of the season, which lasts from May to August. They cut it into pieces, and salt it for future use. This process was in ancient times particularly performed at the town of Thuri in the bay of Tarentum, whence the fish was called *tomus thuriæ-nus*. A description of the ancient manner of taking this fish has been left us by Strabo, from which it appears that the process was the same as that now in use. A man mounts upon a cliff that overhangs the sea: and as soon as he discovers the fish, gives notice to a boat in attendance of the course it has taken. A man in the boat then mounts the mast, and on seeing the sword-fish directs the rowers toward it. As soon as they think themselves within reach, the man on the mast descends, and taking in his hand a harpoon, to which a cord is attached, strikes it into the fish, sometimes at a considerable distance. After being wearied with its agitations and attempts to escape, as well as exhausted by its wound, the fish is seized and drawn into the boat. The operation has considerable resemblance to the whale fishery on a small scale. The superstitious Sicilian fishermen have an unintelligible chant, which they regard as a most essential part of their apparatus. Brydone thinks it is Greek: but be that as it may, the fishermen are convinced of its efficacy as a charm, its operation being to attract and detain the fish near the boat. There are certainly some Italian words in it, although it is said that the men believe that the fish would dive into the water and be seen no more if it happened to hear a word of Italian.

THE NUMBER SEVEN.



EVEN, so often mentioned in the sacred writings, has always had a kind of emphasis annexed to it. It is by some called the number of perfection, being composed of the first two perfect numbers, equal and unequal, three and four—(for the number two consisting of repeated

unity, which is no number, is not perfect). In six days creation was perfected—the 7th was consecrated to rest; if Cain be avenged 7 fold, truly Lamech 70 and 7 fold: Noah had 7 days warning of the flood, and was commanded to take the fowls of the air into the ark by 7's and the clean beasts by sevens; the ark touched the ground on the 7th month, and in 7 days a dove was sent, and again in 7 days after. Abraham pleaded 7 times for Sodom; he gave 7 ewe-lambs to Abimelech for a well of water. Jacob served 7 years for Rachel, and also another 7 years. Joseph mourned 7 days for Jacob. Laban pursued after Jacob 7 days journey. The 7 years of plenty, and the 7 years of famine, were foretold in Pharaoh's dream by the 7 fat and the 7 lean beasts, and the 7 ears of full and the 7 ears of blasted corn. The children of Israel were to eat unleavened bread 7 days. The young of animals were to remain with the dam 7 days, and at the close of the 7th to be taken away. By the old law, man was commanded to forgive his offending brother 7 times; but the meekness of the Savior extended this forbearance to 70 times 7. On the 7th day of the 7th month, a holy observance was commanded to the children of Israel, who fasted 7 days in tents. Every 7th year was directed to be a year of rest for all things, and at the end of 7 times 7 years commenced the Jubilee; they were to observe a feast 7 days after they had gathered in their corn and wine; 7 days they were to keep a solemn feast, as they had been blessed in the work of their hands. Every 7 years the land lay fallow. Every 7 years there was a general release from all debts, and all bondsmen were set free. From this law may have sprung the custom of binding young men to 7 years' apprenticeship, and of punishing offenders with 7 years, twice 7, or three times 7 years imprisonment. Every 7th year the law was directed to be read to the people; if they were obedient their enemies should flee before them 7 years; if disobedient their enemies should chase them 7 ways. In the destruction of Jericho, 7 priests bore 7 trumpets 7 days, on the 7th day they surrounded the walls 7 times, and after the 7th time the walls fell. Hannah, the mother of Sam-

uel, in her thanks, says, that the barren hath brought forth 77, as some Jewish writers say that his name answers to the value of the letters in the Hebrew word which signify 7. 7 of Saul's sons were hanged to stay a famine. Jesse had 7 sons, the youngest of whom ascended the throne of Israel. The number of animals in sundry of their obligations was limited to 7. Solomon was 7 years building the temple, at the dedication of which he feasted 7 days. In the tabernacle were 7 lamps. The golden candlesticks had 7 branches; 7 days were appointed for an atonement on the altar; and the priest's son was appointed to wear his father's garment 7 days. Naaman was commanded to wash 7 times in Jordan to cure his leprosy. Gehazi was ordered to look toward the sea 7 times, and at the 7th time he saw the wished-for cloud. The Shunamite's child sneezed 7 times before life was fully restored. In the 7th year of his reign, King Ahazuerus feasted 7 days, and on the 7th directed his 7 chamberlains to find a queen, who was allowed 7 maidens to attend her. Job's friends sat with him 7 days and 7 nights, and offered 7 bullocks and 7 rams as an atonement for their wickedness. David prayed that the wicked might be rewarded 7 fold in their doom. Solomon says that the fool is wiser in his own conceit than 7 men that can render a reason, and that when the wicked speaketh fair, there are 7 abominations in his heart. Nebuchadnezzar was 7 years a beast, and at the end of 7 years his kingdom was restored; and the fiery furnace was heated 7 times hotter to receive Shadrack, Meebeck, and Abednego.

The Scriptures are illustrated by 7 resurrections, viz.: The widow's son by Elijah, the Shunamite's son by Elisha, the soldier when he touched the bones of Elisha, the daughter of the ruler of the synagogue, the son of the widow of Nain, Lazarus, and the Savior.

Enoch who was translated, was the 7th from Adam, and Jesus Christ, the 77th in a direct line. The Savior spoke 7 times from the cross, on which he remained 7 hours. He appeared 7 times afterward. In 7 times 7 days he sent the gift of the Holy Spirit. In the Lord's prayer are 7 petitions contained in 7 times 7 words.

In the Apocalypse we read of 7 churches, 7 candlesticks, 7 spirits, 7 stars, 7 trumpets, 7 plagues, 7 thunders, 7 vials, and 7 angels to pour them out upon the 7-headed monster, Antichrist.

MENTAL DISCIPLINE.

THERE are many who spend a life of mental effort, who nevertheless fail in attaining to a disciplined mind. This, however, is highly important, it is to the student what skill is to the mechanic. One may read all his days, and accumulate the richest and most valuable products of mind, but unless he possess the capacity of rendering them available, they will be utterly worthless! By the term, "mental discipline," the student understands that condition of the mental and moral faculties, which will at all times enable one to concentrate his attention, and fix his mental grasp upon any given subject without pain, almost without effort, and to accomplish his plan—whatever it may be, with perfect and complete success. There is a mental habitude which enables the mind to adjust itself to its subject with the most gratifying ease—all is regularity, system, precision, life. The productions of such minds appeal directly to the heart—the soul, in its clearest light and development, breathes and burns in every line, and we bow down and admire them as we do the astonishing productions of master geniuses, or the imposing grandeur and awful sublimity of Stromboli, with its lamps of eternal fire. The "myriad-minded" Shakespeare—he whom the world worships, whose lyre speaks to the heart—harsh and discordant though it sometimes is, stands forth as one of the most successful examples of mental discipline which it has ever been the fortune of the world to witness. His was the power to create—from nothingness he evoked a world, a universe of beauty—he "could enter upon any state, assume any character, feel the throbbings of every heart, and the aspirations of every soul." Nature was his study—his alma-mater. He was cramped by no rules—in the pure and pellucid fountain of his mighty spirit, nature was

mirrored in all the winning and majestic loveliness of her own immaculate self. "He set the diamond of his mind in pure gold." With him nature supplied the rules of art; the intuitive perception of his mind, rendered the dicta of the schools superfluous; and, at the high altar of his own bright thoughts, he elaborated those majestic conceptions which, while his language falls familiarly upon the ear, will be the admiration and wonder of the world.

SORROW FOR THE DEAD.

THE sorrow for the dead is the only sorrow from which we refuse to be divorced. Every other wound we seek to heal; every other affliction to forget; but this wound we consider it a duty to keep open; this affliction we cherish and brood over in solitude. Where is the mother, who would willingly forget the infant that perished like a blossom from her arms, though every recollection is a pang? Where is the child that would willingly forget the most tender of parents, though to remember but to lament? Who, even in the hour of agony, would forget the friend over whom he mourns? Who, even when the tomb is closing upon the remains of her he most loved; when he feels his heart, as it were, crushed in the closing of its portal, would accept of consolation that must be bought by forgetfulness? No; the love which survives the tomb is one of the noblest attributes of the soul. If it has its woes, it has likewise its delights; and when the overwhelming burst of grief is calmed into the gentle tear of recollection; when the sudden anguish, and the convulsive agony over the present ruins of all that we most loved, is softened away into pensive meditation on all that it was in the days of its loveliness, who would root out such a sorrow from the heart? Though it may sometimes throw a passing cloud over the bright hour of gayety, or spread a deeper sadness over the hour of gloom, who would exchange it for the song of pleasure or the burst of revelry? No; there is a voice from the tomb sweeter than song—a remembrance of the dead to which we turn, even from the charms of the living.



Oriental Women on Camels.

TRAVELLING IN THE EAST.



ERHAPS the highest excitement that life offers to the Mussulman, is the pilgrimage to Mecca: the lowliest condition, the most advanced age, or immeasurable distance—

is no bar to its performance. From the interior of Africa and Hindostan, the shores, isles, and deserts of the east, an annual myriad advances to the tomb of the prophet. The departure of a caravan in the freshness of its strength and zeal, ere disease and misery have done their work, is a singular and splendid spectacle; the sacred white camel, gorgeously arrayed and attended, the guards, the banners, the hosts, of various nations, complexions, and languages, all pressing on with a lightness of heart, a freedom of step, a face full of the sedate fanaticism of their faith. The more humble and numerous portion of the pilgrims are the most devoted; to worship at the shrine, to wash away their sins, and earn a hadji's honor, is their strong and guiding hope—the prospect of traffic and

gain also animates the merchants, who, as well as the nobler pilgrims, are provided with servants, comforts, and even luxuries. But this pilgrimage is of admirable use in teaching men their utter helplessness, the vanity of earthly distinctions, “the rich and the poor meet together;” they weep in secret; “the servant is as his master.” The hour is sure to arrive, when the caravan, feeble and wasted, the courage lost, the enthusiasm a dream—is seen stealing over the desert, as if the angel of death sadly called them: when the poorer pilgrim, from his burning bed of sand, looks on the great and the luxurious, breathing faintly also, and the harem of the one, and the cottage of the other, flit before the failing eye. Perhaps the night brings the breeze or cloud, and they struggle on their way, till the water, fountain, or stream, is near; and its low sound is caught by every ear with an acuteness that misery only can give. Again all distinctions are forgotten, of sex, rank, and circumstance; the prince and the peasant kneel side by side, or prostrate, like Gideon's troop, drink insatiably, blessing the prophet and each other. The writer was once present at a scene of this kind, in a party, where one of the domestics, in his suffer-



An Encampment of Pilgrims.

ing, poured reproaches on his master ; the rest were silent and dejected ; they had walked from sunrise till noon over a soil utterly parched, and in an intolerable heat, no cloud in the sky, no moisture on the earth ; the hills of white sand on the left seemed to glare on us like spectres : at last we reached a rapid and shallow stream, on whose opposite bank was a stone tower, where a few soldiers kept their lonely look-out against the Arabs. Too impatient to drink in the usual way, the party threw themselves on the shore, and plunging their faces in the wave, drank long and insatiably.

The track of the great caravan, during an unfortunate season, is at intervals strewn with victims ; the first are the old and the sickly ; wasted by the cold as well as the fiery blasts, the bodies rest on the sands, without corruption, such is the excessive purity of the air ; to those who have friends and property, a miserable honor is shown.

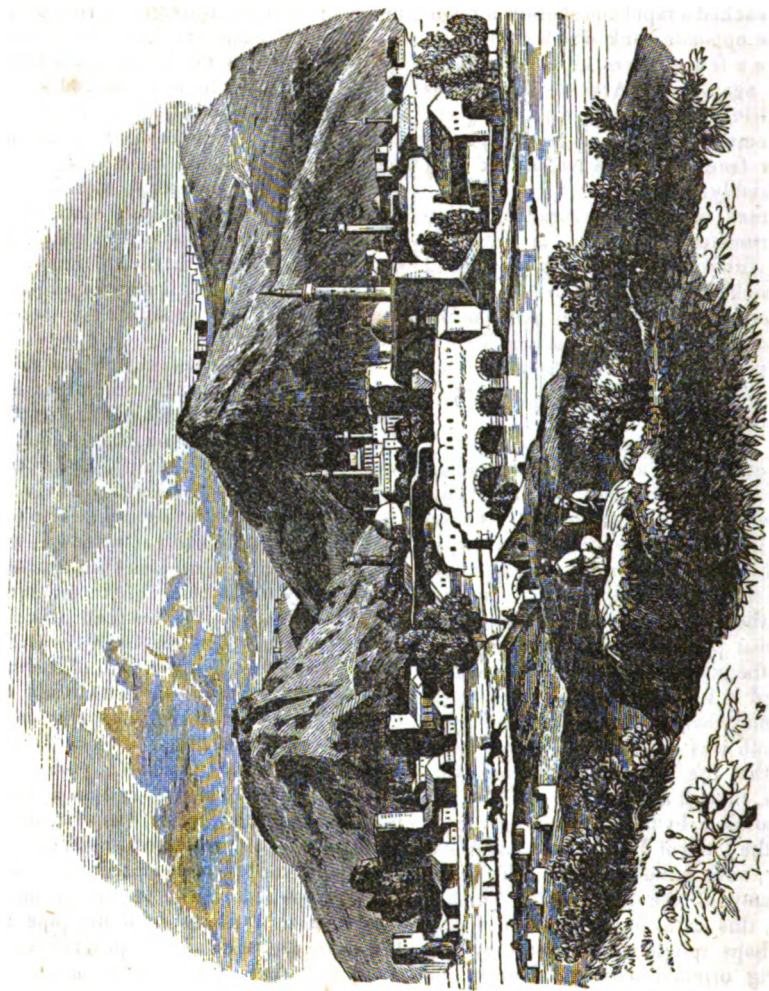
"Just before we reached the wells in this desert," says an Arabian traveller, "we passed by the tomb of a distinguished person, who died on this spot. His companions having enclosed the naked corpse within low walls of loose stones, had covered it over with a large block. The dryness of the air had preserved the corpse in the most perfect state. Looking at it through the interstices of the stones which enveloped it, it appeared to me a more perfect mummy than any I had seen in Egypt. The mouth was wide open, and our guide related that the man had died for want of water, though so near the wells."

It is possible, by fortunate arrangements, to visit the tomb of Mecca without serious calamity, save some inroads on the health and beauty of the ladies, who actually went in this caravan, with an enterprise, and perhaps religious zeal, not very usual among oriental women. Rarely, indeed, do the latter venture their round forms and exquisitely clear and colorless complexions, to the simoom's deadly sweep ; to go forth from the harem, into which the light falls through richly stained glass—to be by night the inmate of a tent during weeks and months, and the prey of the sun and wind by day ; can the thickest veils, the most skilful precautions, pre-

vent mischief to the eyes, the cheeks, the hair ; the limbs will grow attenuated, and the spirits, unused to such stern excitement, languid and broken.

The conductor of this small caravan, to whom the ladies belonged, was a noble Turk, a native of Constantinople, whence he had proceeded through the rich provinces of Asia Minor to Damascus, thence by slow journeys through the deserts to the Red sea, and there embarked for Jidda, which is six days' journey from Mecca. They were now on their return, their consciences pacified, their imaginations bewildered, their memories stored. The trials of the way o'erpast, they were resting among the ruins of Antioch, musing, perhaps, on the tales of peril and change, to tell to the calm and luxurious circles of Constantinople—for which they were in a short time to sail.

The Turkish nobleman and two of his friends were seated on a rich carpet, each smoking the hookah, and sipping coffee ; the baggage scattered on the ground, the horses and camels grazing, some tents open ; groups of pilgrims were conversing, or sauntering about the shores. The tents of the women, closely curtained, were pitched in the rear, no less than six being occupied by the harem and its numerous attendants. The inmates had travelled across the desert in houdas, a covered or open divan, placed on the back of the camel, and either rudely or luxuriously furnished. The writer met, one day, in the deserts east of the Red sea, a Turkish gentleman of Cairo, returning, quite alone, from Mecca ; he was seated in a houda, his solitary camel, seen from afar, the rider reclining as on a sofa, musing indolently, had a droll appearance in so desolate a scene ; the little clouds of smoke that rose at intervals from his pipe into the pure air, told of his progress accurately ; it was by no means unlike the slow movement of a small steam-carriage over the sands, save that no sound came forth ; the Arab guide, walking at the head of the camel, was as silent as his master ; even his melancholy song was hushed. But the Ottoman ladies, who had walked nine times round the adored tomb, kissed the black and miraculous stone of the Cababa, and drank of the well Zemzem—will



Ancient City of Antioch.

be marked and envied beings for the rest of their lives ; in the divans, the baths, the promenades of the city—the words of the fair hadjés will be received as oracles, and companies will hang as greedily upon them, and even more so, than their lords on those of the Arab story-tellers, for they will have the charm of truth. No gain-saying or skepticism can be feared from other ladies, who have never strayed from the banks of the Bosphorus, or heard more awful sounds than the murmur of its waves, or their own fountains.

The Mahometans, from the tomb of their prophet—halting on the ruins of Antioch, presented a mournful comment on the decline of the power and glory of this world, as well as on that of the pure and earliest church of God. The two greatest of the apostles preached, Ignatius taught, and offered himself as a martyr in Antioch ; and great was the prosperity and the joy, during many ages, of its Christian people.

And now—the lofty minarets of the mosques were seen above the broken walls of the ancient city ; there are some remains of a church, said to be that of Chrysostom ; there are tombs also, beneath the shade of the trees, but they do not contain the ashes of the early Christians ; the stone shaft carved, and turban, show them to be the sepulchres of the Turks. The valley of the Orontes is very partially cultivated, save in the immediate vicinity of the river ; the range of Mount Amanus, the Amana of scripture, rises boldly beyond ; far to the right, at a few hours' distance, is the path in this mountain, through which Darius marched his mighty army from the plains of Assyria to the coasts of Cilicia, a few days before the battle of Issus.

To the course of the Orontes new interest is now imparted by the enterprise of Colonel Chesney, who begins his overland communication with India at Suadeah, where this ancient river falls into the sea. From this first footstep on the lonely shore, covered with the ruins of Seleucia, what a career of industry, intelligence, and prosperity, may be expected to arise ! Steam navigation and railroads will traverse the silent plains and the famous but forsaken rivers ; not Cleopatra in her bark

of purple and gold on the Cydnus, excited more surprise than will follow the first steamboat on the Orontes—the herald to the admiring people of a new era in their condition, in knowledge, in comfort, in faith ! The general diffusion of instruction among a people, from whom it has been so long and so utterly withheld, will be the gradual but certain result of the rapid facilities of intercourse with England and America ; the great valley of the Orontes, from the vicinity of Damascus to that of Aleppo, is full of modern as well as ancient interest ; there are several large and wealthy towns, where manufactures might be introduced, and a regular commercial intercourse established ; the cultivation of some districts is excellent, and most are capable of it ; but the people are a prey to indolence and apathy ; they want a new stimulus. And this stimulus will be felt when new sources of trade, of enjoyment, of energy, shall be opened to them. The improvements and changes introduced by the conqueror, Ibrahim Pacha, may benefit his coffers, not his subjects. Railroads and steam-carriages will be the greatest blessings to these rich and beautiful countries ; on their rapid wheels devolve greater changes than on the march of armies. From Suadeah to the Euphrates, and down its waters to the Persian gulf, will no longer be the painful and interminable journey that most undertake from necessity, few for pleasure ; in a few years, the traveller, instead of creeping on a camel at three miles an hour, wasted by sun and wind, may find himself rolling along the plains of Babylon with the speed of thought, while mounds, towers, and tumuli, vanish by, like things seen in a dream ; the man of science, who lingers among the dim ruins, the merchant who carries to buy and sell, may no longer dread the plundering Kurd or Bedouin, when his country's flag heaves in sight far over the plain, on that ancient river Euphrates, as daringly as when

*" Her march was on the mountain wave,
Her home was on the deep."*

The commercial caravans, it is evident, afford the great means of interchanging commodities between countries which would otherwise be cut off from nearly all commercial intercourse. The caravans of



March of a Caravan..

Egypt bring to Cairo ostrich feathers, gum, gold-dust, and ivory, from Abyssinia and the countries beyond it; while those of Arabia exchange the spices, coffee, perfumes, and muslin of Hindoetan. By means of caravans, an interchange of commodities is kept up between China and central Asia; and at the fair of Nijnei Novgorod, tea, brought originally to Kiachta by caravans which perform a land journey of seventy or ninety days, is distributed throughout the Russian empire.

When deserts are to be crossed, the only possible means of transit is by land; but the extension of this mode of transport to the capital of the Russian empire, indicates truly the childhood of Russian civilization. But Asia and Africa are the indigencous countries of camels and caravans, which are the means of advancing and promoting the business, and even the higher interests of life. Without commerce the inhabitants of many parts of Asia and Africa would be condemned to a state of existence deprived of almost every enjoyment; but the camel, which has been most bountifully bestowed upon these arid regions, has facilitated men's intercourse with one another, though the state of these countries has rendered it necessary for merchants and traders to consort with each other in large companies for mutual protection, just as in time of war fleets of merchantmen proceed under convoy. The caravans which travel from the coasts of Egypt, Tripoli, Tunis, Algiers, and Morocco, to Timbuctoo, the great mart of central Africa, are represented as being eighteen weeks in proceeding from the border of the desert. They meet caravans from places in the interior which have never been reached by Europeans. The goods displayed in the markets of Thibet, and those which come from the remotest recesses of Africa, are thus exchanged. The African caravans, it is said, carry coal through the desert.

In the year 1254, the caravan of the mother of Moslem b'illah, the last of the Abbasides, was composed of 120,000 camels; but the Syrian caravan, which is now the largest, did not number more than 15,000 camels in 1814, according to Burckhardt.

THE PAMPAS OF BUENOS AYRES.



LL that tract of country south of the Parana river, and of latitude 33 south, extending west of the Andes, goes by the name of the Pampas, and is a level country, formed apparently by the washings of the great tributaries of the La Plata, without a stone, or rock, or a hill, more than a gentle elevation of a few feet, so level that a carriage can go over the fields in any direction, and without a single tree or bush. It is one immense meadow, covered with luxuriant grass, mingled in the spring time, with a thousand varieties of beautiful flowers. The winter's night is rarely so cold as to form ice of the thickness of glass, and snow is never seen. The thermometer is never below thirty, or above ninety. This plain is but partly settled. A line drawn north and south, one hundred and fifty miles west of Buenos Ayres, and from the Parana river, to three hundred miles south of that city, embraces the portion of the country under civilized rule. Over the rest rove the Pampa Indians, who go as far south as Patagonia, in summer, and who come north in winter. Clothed generally in skins, eating horseflesh, and robbing and murdering wherever opportunity offers, they are the nearest kin to brutes, of any race of Indians that exist on the American continent. The settled part is divided into estates, generally containing two to five square leagues of land. A league contains 5,700 acres, on which the principal business is raising cattle, sheep, and horses. Each land-owner has a peculiar brand, which is registered at the office in the city, and all animals with that brand are his property. The owners drive together all the animals once a year, and brand the young; and when they are sold, they are branded again, or counter-marked, and then marked with the mark of the new owner. The animals are driven up to pens, generally near the centre of the estate, every night, and they soon get into the habit of eating away from their

sleeping ground until noon, and then turning their steps toward home. One square league will support ten thousand animals, although it is rare that so many are put within that space. The calculations early last year, were, that in the state of Buenos Ayres there were 5,000,000 cattle, 4,000,000 sheep, and 1,000,000 horses. Cattle are worth about three and a half silver dollars each, when selected for market. The owner sells a drove. All the animals are driven together, and all the neighbors are invited to the frolic of separating cattle for market. A most exciting frolic it is, for the cattle are not tame, and it is not very safe to approach them, except on horseback. About twenty tame working cattle are stationed about half a mile from the herd. The purchaser points out an animal to be taken out, and three horsemen dash in among them; the animal runs, and the horsemen manage to get on each side of, and behind him. A race begins; the riders, shouting like madmen, so manage as to bring the animal to the spot where the tame oxen are quietly grazing, when, reining in their horses, he darts ahead, and finding he is no longer pursued, stops, evidently astonished at the operation. In this way, twenty or thirty men will select a large number in a day. Sometimes a "novillo" or steer will give them a chase of three or four miles before they can bring him to the right spot. The drove selected, the head driver gets a certificate from the justice of peace that he has examined the marks, and that the cattle are sold by the true owners, with which he starts for town, sometimes 150 or 200 miles, travelling very slowly, and sleeping on the grass near them. Great care must be taken that they do not mix with herds as they pass along, as there are no fences or ditches to separate one's land from his neighbor's.

Arriving at the outskirts of the city of Buenos Ayres, they pass to the great salting establishments, where they are driven into a pen. A lasso, or noose is thrown over the horns, and by a windlass the animal is drawn up to a post, where a man stands, and with a sharp-pointed knife pierces the spine, back of the horns—the animal drops upon a rail truck, and is drawn off to the skinning ground, where

the hide is taken off, the beef cut from the bones and hung up to drain, preparatory to salting, and the tallow all taken out, all within five minutes. The hides are salted and shipped, principally to England; the beef is salted and then dried, and shipped in bulk to Brazil and Cuba: the bones, horns, and hoofs, are shipped to Europe; and the hair from the tails, for mattresses, and the sinews of the legs, for glue, are exported to the United States. About 600,000 cattle are annually killed for the beef, which is cured for export, and about 200,000 are killed and the beef either steamed out for the fat, or thrown away. The export of hides from Buenos Ayres is 1,200,000 per annum. Those for the United States are the lighter kinds, that come from the interior states of the Argentine confederation. The richest cattle-owners are Nicholas Anchorena and his brother Thomas, who sell 70,000 each year, and have about 300,000, and 50,000 horses. There are several who own over 100,000, and the country remaining tranquil and in peace, the number would rapidly increase. The other states of the confederation are not so settled, but have about 3,500,000 cattle; and the republic of Uruguay and the southern part of Brazil (Rio Grande) have 5,000,000 more, making in the country near the La Plata, 13,500,000. The export of hides to Europe and the United States is about 2,500,000 annually.

Sheep have been much neglected until within fifteen years past. Formerly they were considered as worth but a few cents each, and the story of their being used to burn brick with, in former times, is true. The common wool is now worth, when washed, about six cents the pound. Within fifteen years many persons have turned their attention to importing fine sheep, and crossing them with the sheep of the Pampas. Over ten thousand full blood merino sheep have been brought to the country, from Germany and the United States. The pure blood sheep born in the country, and taken care of, deteriorate very little in the fineness of the wool, and some of the sheep that are crossed three quarters, or seven eighths full blood, produce very fine wool. The largest sheep estate is that of Mr. Sheridan, an Irish gentle-

man, where there will be one hundred and fifty thousand sheared this year, all of them from one half to full blood merino. This estate is about fifty miles south of Buenos Ayres, contains seven league square of land, and is called, "Estancia de los Saiones," or "Estate of the Saxones"—it being devoted entirely to the raising of sheep, which are divided generally into flocks of 3,000 to 5,000 each. A man or boy on horseback, always accompanies them. They require but little care, beyond letting them out of the pen, and driving them back, every day in the year. The soil of the Pampas is impregnated with saltpetre, and the water is brackish. To this is attributed the absence of foot rot and other diseases among sheep. The shearing season commences the middle of October, the shearing being mostly done by women. Some of them will shear fifteen, and even twenty sheep in a day. The level nature of the country and the absence of running water, make it impossible to wash the wool on the sheep's back. It is rolled up as sheared, and with considerable dirt, put into carts, which take it to town, where it is valued and shipped. The greatest drawback to the producing of wool on the Pampas, is the small burr which adheres to the wool. It is the seed of a species of clover, of which the sheep are very fond, and in some parts of the country there is so much of it, as to render the wool of little value. A small shrub that grows two or three feet high, produces a burr as large as a marble, which is easily taken out. The manes and tails of horses feeding among this, are frequently an enormous mass of burr of many pounds weight. The common wool of the country is generally washed after shearing, it being of little importance to keep the fleeces entire. The wool washed at Buenos Ayres has a harsh, crispy feeling, arising from the water. The Southdown sheep are hardiest, and increase the fastest. Don Faustino Xemes has 60,000, on his estate, twenty miles from the city, but generally the proprietors have crossed with Saxony. The wool from Cordova, one of the interior states of the confederation, is free from burr, and a much cleaner kind than the Pampas wool. There was exported from

Buenos Ayres the past season 20,000,000 pounds of wool, of which two thirds went to the United States. This was not all the product of that state; as part of it came from Cordova, Entre Rios, and the republic of Uruguay.

Horses of the Pampas are a small race, originally from Spain. They are most excellent saddle-horses, and have great bottom, but are not of sufficient weight for carts or carriages. They have increased to such an extent, as to be of little value except for the hide. Horses are the principal munition of war, and all are subject to be taken by the government. An army marches with three horses for each soldier, and the Argentine government have a reserve of 90,000. All battles on the Pampas are decided by the cavalry and light artillery, which is equal to any in the world; and the success of the Argentines in all their wars, may be ascribed to this cause.

Every estate has one hundred horses and mares to every one thousand cattle, and in some parts the proportion is larger. Formerly, government allowed horses to be killed and the carcasses steamed, by which process, at times, fifty pounds of oil is extracted, which is shipped to the United States, and there sold as neat's foot oil. Fearing that the stock of horses would decrease, this has been prohibited, and horses are of little value; a flock of them, with mares and colts, not being worth more than seventy-five cents each. Tamed and broken for the saddle, they are worth three to five dollars. Fancy ones bring fancy prices, and occasionally a horse will sell as high as one hundred dollars, but it is very rare. Like the cattle, they are all branded, which gives strangers a very disagreeable impression at first.

Wheat and corn are now raised, sufficient for the consumption of the country, and at times they are exported. The farmers keep the cattle from their fields by boys on horseback, driving them away—as fences and ditches are rare. There are immense quantities of thistles, which in spring shoot up to six or eight feet. The sun dries the stalks, and they are used for fires in the country. Many of the estates have squares of peach-trees, which are cut down every four years.

Peachwood is almost the only firewood of the city, except what is brought from the north side of the river and Brazil; and the trees planted on the islands of the Parana river by the Jesuits, have now spread over its thousand islands, and the towns on its banks are supplied with fruit and firewood from them. The fruit is a variety of cling-stones, not very large, but of good flavor. The soil is so rich that potatoes require foreign seed. The third crop is so watery as to be unfit for eating. Beans, peas, and most vegetables, are raised in great abundance, particularly tomatoes.

The Pampas abound in game in almost incredible quantities, and animals with valuable skins; hares, and armadillos, that are considered a great luxury for eating; the biscatchia, a species of the prairie-dog; the nutria, a species of muskrat, the fur being a substitute for beaver, and of whose skins 500,000 are annually exported; ostriches, and every species of crane; the scarlet ibis, flamingoes, and spoonbills, which are sometimes seen in thousands; curlew, plover, and snipe, of various classes, and in great abundance. The officers of our navy would frequently bag fifty brace in a day's shooting. Two kinds of partridges and pheasants, double the size of ours; swans and wild geese, in such quantities as in winter to literally make parts of the lakes look white. Thirty-two different and distinct kinds of wild duck have been found on the Pampas. Some of them have been pronounced equal to canvass-backs. The rivers abound in fish to an incredible extent. About twenty varieties, and all very good, are to be found in the market. A climate with but few changes, and of delightful temperature. It only requires peace, to convert these Pampas into a flourishing agricultural country. Millions can be sustained where now only thousands exist.

HOME.

ATTACHMENT to the place of his abode, whether an innate principle of the human mind or merely the result of association, is a feeling universally observable in man. In the minds of those whose home is the

place of their birth, it is naturally connected with their first experience of life, and light, and health; a mother's fondness and a father's care; the affection of relatives, the sports of boyhood; the occupations of riper youth; the first dawnings of hope, and aspirations after happiness; with the season when life, and futurity, and all things seemed fresh and beautiful, ere the disappointments of maturer years had chilled the scene of our birth and early life, still it has much to endear it to our hearts; it is linked inseparably with all our pleasures and pursuits; the thought of home gives us strength to labor, and fortitude to endure, thither do we look for comfort, there do we take refuge from every external evil: there are gathered together those who are more precious to us than ourselves; those who are not less beloved because they are the friends more of sympathy and choice than of natural consanguinity; in ten thousand ways are our feelings, our thoughts, our actions, identified with home; to it we are bound by ties which increase in number and in strength with increasing years.

THE FAIR OF REYKIARÍK.



WO things have remarkably distinguished Iceland—the aspect and nature of the island; and the character of its inhabitants. In no quarter of the globe do we find crowded within the same extent of surface such a number of ignivomous mountains, so many boiling springs, or such immense tracts of lava, as here arrest the attention of the traveller. The general aspect of the country is the most rugged and dreary imaginable. On every side appear marks of confusion and devastation, or the tremendous sources of these evils in the yawning craters of huge and menacing volcanoes. Nor is the mind of a spectator relieved from the disagreeable emotions arising from reflection



Icelanders arriving from the Interior at the Fair at Reykjavik.

on the subterraneous fires which are raging beneath him, by a temporary survey of the huge mountains of perpetual ice by which he is surrounded. These very masses, which naturally exclude the most distant idea of heat, are frequently seen to emit smoke and flames, and pour down upon the plains immense floods of boiling mud and water, or red-hot torrents of devouring lava. Yet this rugged and dangerous island, so far from being uninhabited, or inhabited only by a people in the lowest state of intellectual and physical improvement, has been long famous for its literature and its state of comparative civilization. It had a representative form of government, and its inhabitants were an enlightened people, when Europe was but advancing from darkness. And though it is now thrown into the shade, because Europe has gone forward, while Iceland has become a dependency, lost its representative government, and been afflicted with evils, arising from furious volcanic eruptions, earthquakes, disease, &c.; still the Icelanders are an educated people, to a degree which is extraordinary when contrasted with their situation. Dr. Henderson created much interest in Britain by the proofs which he afforded of the intelligence of the Icelanders. The following is an instance: "As I rode along, I was entertained by the interesting conversation of a peasant, who was travelling to Reykiarík in order to dispose of his country produce. The knowledge which he discovered of the geography and politics of Britain quite astonished me. He gave me a long detail of the events that transpired during the usurpation of Cromwell, and proposed several questions relative to the Thames, Tay, Forth, &c. His acquaintance with these things he had chiefly derived from Danish books; and having lately fallen in with a work in German, he began to learn that language, in order to make himself master of its contents."

Reykiarík, to which this peasant was travelling to dispose of his produce, is the capital of Iceland, and the only place approaching to our idea of a town in the island. Speaking of its cathedral, Mr. Barrow says: "Under the roof of the church is the public library, said to con-

tain about 6,000 volumes, to which the inhabitants have free access, being allowed, under certain restrictions, to have books at their own houses; and I was assured that the residents were generally very fond of reading. The books consisted mostly of general and ecclesiastical history, in the northern languages—German, Swedish, Danish, and Norwegian; such is related to Iceland, their sagas and their eddas; and it contained also a few English books, generally the writings of our best poets, and also a collection of the Greek and Latin classics, besides some manuscripts, chiefly theological, the production of the clergy of the island. The Icelanders were once deservedly famed for their literary productions; and it is pleasing to find that they still keep alive the spirit of research and that literary pursuit for which their ancestors were distinguished."

Reykiarík lies on the western side of Iceland. The southwest corner of the island projects considerably into the sea, forming the southern side or boundary of a large bay, called by Dr. Henderson and others Faxó Fiord.

A stranger who first approaches the shore on which Reykiarík stands, and has not prepared himself by reading for what he may expect, beyond the simple fact that it is the capital of Iceland, can not possibly behold what he sees of it—and he sees at least the better half of the whole from the anchorage—without experiencing a strong feeling of disappointment. He perceives only a long row of houses, or rather the upper parts of houses, running parallel to and close behind a rising beach of black shingle, their red or brown roofs being the most conspicuous, and the tops of the doors only, and perhaps about half of a row of windows, peeping above the said beach, but he sees enough of them to satisfy himself that they are of a low, mean character, and only of one story in height. On each extremity of this line of houses he will observe a rising eminence, scarcely deserving the name of a hill, on which he will perceive a number of sod or turf huts raised a little, and but a little, above the level of the ground; their roofs, and generally their sides too, verdant enough, and well clothed with

grass—the abodes chiefly of fishermen, laborers in the merchants' employ, and idlers, of which there were not a few at this time sauntering about the town. . . . In addition to the row of houses seen from the harbor, another row made its appearance behind it—perhaps I ought to say two imperfect rows, forming a sort of street, running at right angles with the former, near its western extremity. This street or space between the houses was encumbered with the same kind of rocks starting out of the soil that we observed in the plain. In this portion of the town is the residence of the Landfogued, or treasurer; and near the farthest extremity is a sort of tavern or society-house, where the Danish and other mercantile residents assemble, forming a kind of club, where they play billiards and other games, and have dinners, balls, and other amusements occasionally.

The houses on the sea-line are generally those of the merchants, who are chiefly Danes; they are built, as in Norway, of wood, and covered with shingles or planks, and to each is attached a storehouse for their different articles of merchandise. The only stone-built house is that of the governor, situated at the eastern extremity of the line, and this building was formerly the workhouse—not for the maintenance of the indigent poor, but made use of rather as the house of correction. The episcopal residence is near to the coast, considerably to the eastward of that of the governor—a very comfortable house, built of brick, and white-washed. There is a hot-spring in the neighborhood of Reykiarik, which sends up a continual column of steam, and which may have given name to the capital—the smoking village.

The grand annual event of Reykiarik is the fair, which brings together the peasantry from all parts of the country. After the long winter, there is a bustle of preparation among the Icelanders. The melting of the snow from the ground allows the horses to get a little grass, on which they thrive well, and rapidly recover from the lean and miserable condition into which their scanty winter fare had thrown them. The fleeces are taken from the sheep; the roads are passable, if roads they can be called, where not a wheel-carriage of any

kind can be used; and the peasantry, having nothing particular to occupy them till the hay harvest sets in, prepare, in the month of June, for the fair of Reykiarik. They bring down in boxes or little chests, or skin-bags, as it may happen, slung across their horses' backs, wool and woollen manufactured goods, such as cloth, knitted stockings, and mittens, butter, close pressed and packed in barrels, skins of cattle, calves, sheep and lambs, and tallow.

The peasantry encamp in the neighborhood of Reykiarik during the fair, and the short period of its duration is one of great bustle and activity. It affords the only opportunity of seeing the *population* of Iceland. During the rest of the summer Reykiarik is tolerable, and affords a little society; but after the merchants depart, and the winter sets in, it is one of the dreariest places on the globe.

POWER OF KINDNESS.



O man hath measured it; for it is boundless; no man hath seen its death, for it is eternal. In all ages of the world, in every clime, among every kind, it hath shone out—a bright and beautiful star, a beaming glory!

See Joseph in the hands of his wicked brethren. For a few pieces of paltry silver, they sold him into Egypt. Providence in kindness broke the bands which held him in slavery, and made him a ruler there. Famine spread over the land her dark mantle, and the cruel brethren of Joseph hungered. They went to Egypt for corn. How now acted Joseph? More than once he filled their sacks, and returned them their money, and then made himself known. "I am Joseph, your brother, whom you sold into Egypt!" Here was kindness, forgiveness. And it crushed to death the spirit of jealousy, that had once made him a slave. He had conquered!

Look at the case of Saul and David.

Bitter and blasting jealousy filled the heart of Saul, and he "sought to take the young man's life." With hellish hate, he hunted him, even to the dens and caves of the earth. But David conquered his enemy; even the proud spirit of haughty Saul be humbled. And how! Not with sword and spears, not with harsh and coarse contumely, for these did never touch the heart with gentle influence. No, but with a weapon as simple as the shepherd's sling, yet sure as the arrow of death. 'Twas kindness! This killed rankling hatred, and left Saul to like. And when it had done its work, Saul said to David: "Thou art more righteous than I, for thou hast rewarded me good, whereas I rewarded thee evil." Was not here a victory—more glorious, more godlike than a Wellington ever knew?

Come further down in the world's history, and tell me, what word of all those spoken by the "meek and lowly Jesus,"—"the Prince of peace," the "Savior of the world," was best calculated to soften and subdue the hard hearts of his persecutors? Are we not pointed to the cross on Calvary? Are we not asked to listen to the soft sweet tones of that voice?—"Father, forgive them!" O, here was kindness!

Was not the kindness exhibited by the martyr Stephen, when he cried aloud, "Lord, lay not this sin to their charge," a holy triumph over his persecutors?

Look over our extended country at the present day. What has changed those miserable hovels of other days, where misery and wretchedness had dwelt, into the neat and beautiful abodes of plenty and peace? What has kindled anew the flame of love and affection, in hearts long estranged and freezing with coldness? What has made happy the homes of thousands of wives and tens of thousands of children? What, in short, has been the great propellant of the temperance reformation, which has carried joy and gladness all over our land? What, but kindness?

Reader, have you an enemy, whom you would make a friend—a neighbor, who needs repentance—a fallen brother, whom you would restore to sobriety and virtue? forget not the power of KINDNESS!

WHITE OR BARN OWL.



THE most common observer can not fail to remark that there is a very considerable affinity between the falcon and owl genus of birds. Owls may indeed be regarded as a sort of nocturnal hawks; differing from them, much in the same way that the moth differs from the butterfly. Ornithologists enumerate eighty species of owls; but they admit that the number accurately known is less numerous; the same bird, under a changed aspect, having in some instances been set down as a distinct species. The following may be stated as the characteristics in which they all agree. The bill is crooked, as in the falcons, but is not usually furnished with a cere; the nostrils are oblong, and covered with bristly feathers; the head is large, and so are the eyes and the openings of the ears; the tongue is divided; the toes are placed three before and one behind, the exterior toe capable of being occasionally bent backward; the exterior edge of one or more of the greater quills is serrated in most of the species. There are a few species which can see in the daytime, and are in the habit of then taking their prey; but owls are generally nocturnal birds, most of them seeking their prey by night, or rather in the twilight, at which time, or in the gray of the morning, they appear to distinguish objects best. There is no evidence that they can see when the night is very dark; the time, therefore, allowed them to hunt for prey is very limited, except on moonlight or other favorable nights, when they may be observed to seek their prey from night to morning. Limited as their time of providing for their wants usually is, they enjoy advantages which enable them to receive an adequate provision in a comparatively short time.

The beautiful species represented in our engraving is the common white or barn owl, called by some naturalists *strix flammea*, and by others *aluco flammea*.

The downy softness and remarkable elegance of the plumage of this owl are entitled to more admiration than they seem

White or Barn Owl.



to have obtained. Superstition on the one hand, and the commonness of the bird on the other, seem to have prevented the beauty of the white owl from being duly appreciated. We shall not minutely describe the appearance of so common a bird, but may observe that the plumage is generally of a reddish-yellow color with gray variegations, having black and white spots down the shafts of the feathers, and the breast and belly white, sometimes yellowish, and occasionally marked by a few blackish or dusky spots. The bill is straight to near the tip, instead of being arched from base to point as in the other species. The large eyes, the irides of which vary from nearly black to yellow, are surrounded by a large circle of soft white feathers; but the ruff is edged by a rufous or chestnut verge intermixed with white. The legs are feathered to the toes, which are covered with fine hair.

This species, with some variation from climate, is very extensively diffused over the world. It is well known in different parts of Asia, and in both North and South America.

The white owls chiefly live upon mice, which they swallow whole; but they will often destroy young birds. Mr. White, the author of the "Natural History of Selborne," mentions a pair, which infested a dove-house, and made great havoc among the young pigeons. This owl breeds in hollow trees, near farm-houses, and frequently in barns, or under the eaves of a church or other old building. It does not make any regular nest, but lays three or four eggs upon some woolly or downy substance placed in a very slovenly manner. It should be observed that these birds remain in barns, hay-lofts, and other out-houses, during the greater part of the year, but take to the eaves of churches, holes in lofty buildings, and the hollows of trees, in the breeding season. They are almost exclusively found in inhabited districts, and their utility in clearing barns of mice renders their presence welcome to the farmer.

White owls are said to scream horribly as they fly along; from this screaming probably arose the imaginary species of screech owl, which the superstitious think attends the windows of dying persons.

THE EYE.



WE have, in another place, incidentally remarked, that the eye indicates the holier emotions. In all stages of society, and in every clime, the posture and expression of rever-

ence have been the same. The works of the great masters, who have represented the more sublime passions of men, may be adduced as evidences: by the upturned direction of the eyes, and a correspondence of feature and attitude, they address us in language intelligible to all mankind. The humble posture and raised eyes are natural, whether in the darkened chamber or under the open vault of heaven.

On first consideration, it seems merely consistent, that when pious thoughts prevail, man should turn his eyes from things earthly to the purer objects above. But there is a reason for this, which is every way worthy of attention. When subject to particular influences, the natural position of the eyeballs is to be directed upward. In sleep, languor and depression, or when affected with strong emotions, the eyes naturally and insensibly roll upward. The action is not a voluntary one; it is irresistible. Hence, in reverence, in devotion, in agony of mind, in all sentiments of pity, in bodily pain with fear of death, the eyes assume that position.

Let us explain by what muscles the eyes are so revolved. There are two sets of muscles which govern the motions of the eyeball. Four straight muscles, attached at cardinal points, by combining their action, move it in every direction required for vision, and these muscles are subject to the will. When the straight muscles, from weariness or exhaustion, cease to guide the eye, two other muscles operate to roll it upward under the eyelid: these are the oblique muscles. Accordingly, in sleep, in fainting, in approaching death, when the four voluntary muscles resign their action, and insensibility creeps over the retina, the oblique muscles prevail, and the pupil is revolved,

so as to expose only the white of the eye. It is so far consolatory to reflect, that the apparent agony indicated by this direction of the eyes, in fainting or the approach of death, is the effect of encroaching insensibility—of objects impressed on the nerve of vision being no longer perceived.

We thus see that when wrapt in devotional feelings, and when outward impressions are unheeded, the eyes are raised, by an action neither taught nor acquired. It is by this instinctive motion we are led to bow with humility—to look upward in prayer, and to regard the visible heavens as the seat of God.

"Prayer is the upward glancing of the eye,
When none but God is near."

Although the savage does not always distinguish God from the heavens above him, this direction of the eye would appear to be the source of the universal belief that the Supreme Being has his throne above. The idolatrous negro in praying for rice and yams, or that he may be active and swift, lifts up his eyes to the canopy of the sky. So, in intercourse with God, although we are taught that our globe is ever revolving, though religion inculcates that the Almighty is everywhere, yet, under the influence of this position of the eye, which is no doubt designed for a purpose—we seek him on high. "I will lift up mine eyes unto the hills whence cometh my help."

See, then, how this property of our bodily frame has influenced our opinions and belief; our conceptions of the Deity, our religious observances, and daily habits.

THE LAGO MAGGIORE.

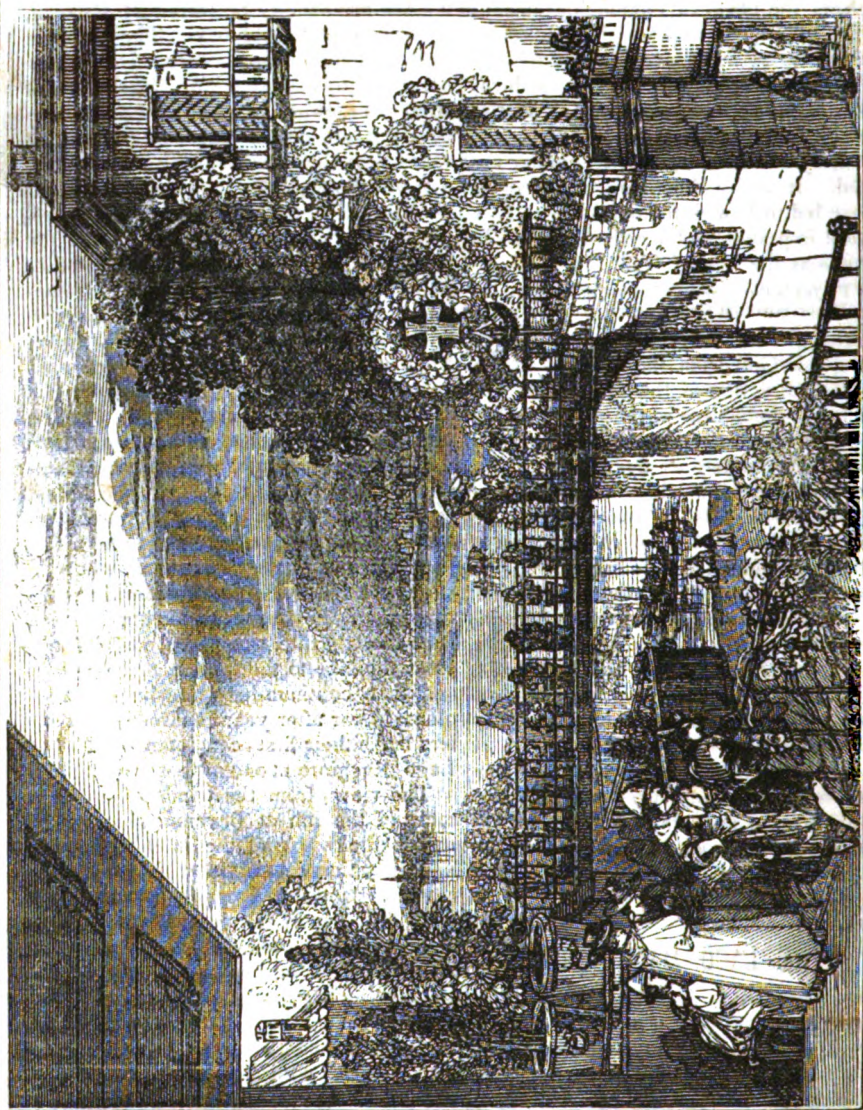


LAGO Maggiore is the largest of all of those beautiful lakes that lie at the foot of the Alps, on the Italian side. It is about forty-five English miles long, but its breadth is small in com-

parison to its length, varying from two to five miles, while in the lower part of its

course, below the towns of Arona and Sesto, it becomes so narrow as to look rather like a stately river than a lake. Its greatest breadth is at Baveno, where, turning the promontory of Intra and Palanza, it forms a deep bold bay. The distance from Baveno on the western side to Laveno, on the eastern shore, is not much short of seven miles, and at either of these points it presents a magnificent sheet of water, and the most picturesque combination of islands, hills, and mountains. It is fortunate that these two pleasant towns, which are built on the very margin of the lake, and present the finest views of it, lie immediately on the high road of travellers. In going southward from Switzerland, and crossing the Alps by the grand Simplon road, the tourist descends suddenly on Duomo d'Ossola, at the very foot of the Alps, and a few hours afterward he reaches the posting town of Baveno, where the first burst of the scene is like enchantment. In coming northward from Milan, by Varese, with its little miniature lake, that lies sleeping among vineyards, a fine posting road leads to Laveno, where it stops, and thence, after admiring the reverse of the beautiful picture as seen from the opposite shore, he can embark, cross the lake to the islands and Baveno, and then continue his route by the Simplon. Year after year hundreds of travellers make their first acquaintance with the Lago Maggiore at one of these two points.

The views from the windows and terraces of the inn at Baveno, which commands the whole of the inlet or bay we have mentioned, and in which the Borromean islands are grouped, are eminently beautiful; but to obtain the true point of sight, if he does not intend to cross over to Laveno, the tourist should take a boat and row a little beyond the islands to the middle of the lake. There the bosom of the lake, the gentle shores, and the green hills dotted with towns, villages, and country-seats, and the granite mountains of Baveno and Montorfano disclose themselves with the happiest effect; on one side (to the south) the mountains decline into bosomy hills, which are gradually lost in the rich and boundless plain of Lombardy, while on the other hand (to the north) the eternal-looking Alps, with their



View on the Lago Maggiore, from the Inn Baveno.

coronets of dazzling snow, tower over lake, hills, and mountains, and dash sublimity into a picture which otherwise would only be remarkable for its smiling, placid loveliness. From the particular point we speak of the whole panorama is almost matchless. The small fairy-like islands, brought under the lee of your boat, the white sails glancing across the bay, and the romantic little town and pleasant inn of Baveno, are there all beautiful accessories to the picture, and are seen nowhere else to such advantage.

The capital attraction to most travellers in the Isola Bella, or Beautiful island, one of the Borromean group near to Baveno. We think this particular island, which is thoroughly artificial, rather curious than picturesque or beautiful; but it tells well at a distance with its lofty palace, its terraces, and formal groves and gardens, and contrasts in a striking manner with the simplicity or wild nature of the other islands, while it calls for that tribute always due to the art and industry of man when they have overcome great natural difficulties. *Le Isole Borromea*, as they are called, after the name of the noble Lombard family to which they have belonged for several centuries, are four in number—the Isola di San Giovanni, or, as it is frequently called, the Isolino (small island), the Isola Madre (mother island), which stands in the midst of the group, the Isola Bella, and the Isola Superiore, which is oftener called L'Isola de' Pescatori, or Fishermen's island. This last island, with its humble homesteads and church spire, always struck us as being the prettiest of the group, and it is the one represented in our engraving, which is taken from an original drawing, wherein the artist set down without change or composition a scene he saw from the pleasant inn at Baveno.

In the midst of this island stands the palace of the Borromeo family. Though certainly no model of architecture, it has an air of elegance and even grandeur. It perhaps even improves in the interior, where, mixed up with much magnificence, there are several truly delightful apartments that offer that union of comfort and elegance which is always so dear to a traveller.

BEFORE AND AFTER DINNER.



HE various propensities and dispositions of different individuals, have often been dissected and described by metaphysicians and moralists; but, so far as we know, few have undertaken to descant on the fact, that every individual presents many, and sometimes opposite characteristics at different periods of the same day. Some men, though amiable enough in the main, are remarked to be peculiarly tetchy on rising in the morning; others, when they feel sleepy at night; but there is no period when one is so likely to make one's self disagreeable as just before dinner. "No person," says a learned writer on digestion, "will deny that hunger is a painful sensation, whatever may be his opinion of appetite." When, therefore, a man feels hungry (which he generally does a little while before dinner), he is in pain; and when a man is in pain, he can not be expected to feel comfortable within, or to make himself agreeable to others. On the contrary, the moment his sensations glide from appetite to hunger, the outworks of philosophy give way; the enemy saps the very foundations of his character. When, therefore, you want to see a sanguine man despond, a cheerful one sad, a forbearing man impatient, or a benevolent one uncharitable, watch him while being kept waiting for his dinner. The best of tempers will not, at such a moment, require much provocation to get ruffled. My friend Rossan offers an apt example of these frailties. For about twenty-three hours and three quarters out of every twenty-four, a better friend, a kinder husband, or more indulgent father, does not exist; but make your introduction to him during the fifteen minutes before dinner, and you will conclude him to be the reverse. His wife's smiles are unheeded, his children's prattle forbidden, his friend's remarks unanswered. And wo unto the household should the cook prove unpunctual!

This is the dark side of the case. Most people are well-disposed after dinner. In proportion as pain is great, so are the

pleasures of alleviation; and, when the cravings of appetite are satisfied, not only do the good qualities of mankind regain their ascendancy, but their bad ones hide their diminished heads. The Chinese believe that the intellect and affections reside in the stomach; and really when one considers the entire moral revolution which occurs immediately after dinner, the notion loses half its absurdity. The change which takes place is so complete, that to describe people who *have* dined, it is only necessary to invert every characteristic of those who have not: then the despondent are filled with hopes; the irritable appear patient; the melancholy are gay; the miser becomes philanthropic, and the misanthrope good company. Misfortune is never so stoically received as when it makes its appearance after dinner. One day news came to Rollan that he had lost several thousand pounds; luckily, it arrived while he was enjoying his dessert, and he heard it without a sigh. It is, however, terrible to contemplate the effect the black intelligence would have had upon him if communicated during his antepandial susceptibility; for on that very day he had previously shown the most intense mortification because dinner was not announced till very nearly four minutes and a half after the fixed time!

Besides the inward characteristics which separate men who have and men who have not dined into two distinct classes, there are outward and visible signs by which they are readily separated and recognised.

The man who has not dined may be known as he walks homeward by the impatience expressed in his gait and aspect, and the fidgetiness he manifests if you should stop him to have a little conversation. Wo to you if such a conversation refers to any affairs of your own, in which you wish to interest him for the sake of his assistance or advice. He can not even be civil on such topics. Should your observations refer only to the chit-chat of the day, the case is little better. He takes decidedly different views as to the merits of Roland's grand assault last Saturday, and can not at all agree in opinion with you that the wind is promising to change from the east. With regard to the state of the country, he is clear and un-

hesitating: all is going wrong, and starvation is staring the country in the face. This, however, does not make him a whit more tolerant of the beggar who now comes up as if to illustrate his argument. He silences the whine of the petitioner in an instant by a threat of the police.

Arriving at his door, he announces himself with a sharpness of ring which startles the powers of the kitchen into a fearful animation. Mary, as she opens the door, answers the question, "Is dinner ready?" with an affirmative at all hazards, and then plunges down stairs to implore Mrs. Cook to make her fib a truth. Stalking abstractedly into his dressing-room, he fails to find, first the boot-jack, then the soap, and it is well he does not summon half the household to show both, to his confusion, in their usual places. The slightest tumult among the children three floors up now annoys him. His wife, to fill up the time till dinner appears, asks his opinion of some new purchase, which was made because she knew he would like it; but, to her extreme mortification, he wonders how she could choose such an "ugly thing." As the minute-hand of the time-piece approaches the figure twelve, he commences an anticipatory lecture on the advantages of punctuality, which increases in earnestness at every second after the clock has struck, and is gradually rising to the severity of reprimand, when—happy moment—enter the soup! Now commences an entire change in his external aspect, and in about twenty minutes he becomes

The man who has dined. Behold him now, seated in his lounging chair. His countenance is overspread with a smile of satisfaction. The harsh and grating tones of his voice are mellowed to softness; and instead of addressing his wife in half-snappish laconics he converses in the most soothing terms of affection and endearment. On being enticed to take a second glance at the new dress, he thinks it is not so ugly after all: indeed, of one thing he is quite certain—though he does not pretend to be a judge—but the colors will become her complexion admirably. This is the moment generally seized upon by ladies of tact to put in practice that pretty process of getting their own way called

"coaxing." At such moments new bonnets are promised, and checks written for milliners' bills. Evening parties are arranged, "regardless of expense," and lessons from first-rate music-masters contemplated for elder daughters. This, bringing the rest of the junior branches in mind, leads to the ringing of the nursery bell, and though the children may happen to get up a race along the stairs to see who can get into the parlor first, and thereby create a most deafening clatter, the well-dined father blesses their merry little hearts, and is delighted that they are in such excellent spirits. Should a friend drop in, instead of being wished almost anywhere else, he is pressed to remain; and a quarter of an hour's conversation shows that the host's opinions concerning the weather and the state of the country, have undergone a change. It is after dinner that our country is pronounced the greatest, best, and happiest nation in the world. The distress of the country fades gradually from the view: it dwindles down to a few interesting cases of operative manufacturers thrown temporarily out of employ, or of distressed agriculturists in picturesque cottages being kindly relieved by sentimental ladies or philanthropic country gentlemen. Then is the time that subscriptions to public charities are paid up, and coal and blanket societies planned for the ensuing winter. Nor does this sort of hopeful patriotism solely occupy the imagination of the man who has dined. His own affairs present themselves to him in brighter colors than at any other time. He builds castles in the air, congratulates himself on the improved aspect of his affairs, and very likely asks his wife, in the event of their ever keeping a carriage, what color she would like the horses to be? He appeals to his friend as to the best mode of investing spare capital; and asks him if it be true that a certain estate in the neighborhood is in the market, dropping at the same time a hint that, if it should come to the hammer, he shall attend the sale. In short, after dinner everything seems colored with a pleasing pink, which, speaking more strictly, is merely the moral medium through which we see the objects of our thoughts.

These, then, are the almost opposite ef-

fects often betrayed by the same man before and after dinner. Let us, however, return to the subject in a larger—more general—point of view. Man's thoughts and sentiments being swayed in a great degree by his sensations, the former will generally be hopeful or despondent as his sensations are pleasing or painful; and who will deny that these are more pleasing when his appetite is satiated than when it is craving? There are exceptions to this rule no doubt; for we have heard of gourmands who hunger and thirst after an appetite in order to enjoy the pleasure of satisfying it, and whose despondency only commences when they find they can not eat any more. But these are happily few, because unnatural exceptions. Nature tells us when to eat by exhausting our forces, and by making it a pain to disobey, and a pleasure to obey her dictates. Snappishness before, suavity after dinner, certainly form the general rule. This becomes a very important maxim in suitors and favor seekers. How many an individual has marred his fortune by asking the favor that would have made it, before, instead of after his patron's dinner! So fully convinced is an extravagant young Howard friend of ours of the necessity of timing his applications to the "the governor" for more cash, that he invariably sends his letters by the *day* mail, that they may catch the old gentleman napping just after dinner. The managers of charitable societies invariably make their collections after the hearts of the subscribers have been opened by a first-rate tavern feast. "The trade," *par excellence*, disarms the business-like caution of the booksellers at their annual auctions by a like expedient, and never think of putting up a single lot till after the removal of the cloth. In short, a thousand similar instances might be adduced to show that the tide of fortune and liberality flows highest after dinner. How different is it during the hour before! Then it is that quarrels are begun, and law pleas commenced; then it is that cross fathers cut off erring sons with a shilling, and wives and husbands talk of deeds of separation; at this inauspicious period editors become super-particular, and reject the lucubrations of doubtful contributors; and critics get so

uncommonly vigilant, that scarcely anything in a book will please them. Reader, when you have a favor to ask, a bargain to make, a contribution to send to a magazine, or a book to forward to a critic, be careful, if you can possibly help it, not to address yourself to an empty stomach.

COLOGNE.



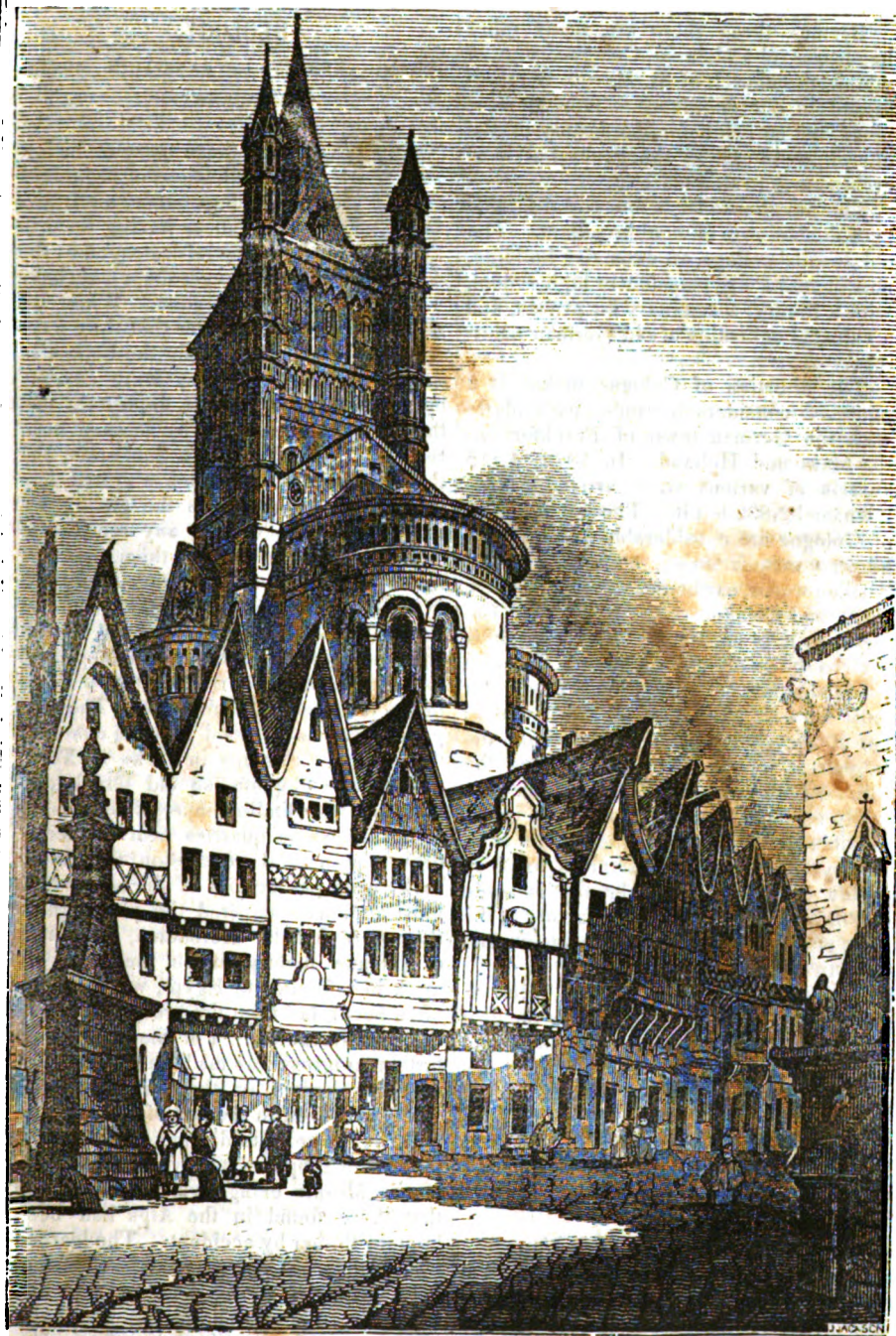
COLOGNE, called by the Germans Cöln, is situated in a district of the same name, which is one of the two divisions of the Prussian province of Jülich-Cleve-Berg, so called from its containing the three old duchies of Jülich or Juliers, Cleve, and Berg. Cologne is the capital of the whole province, and stands on the left or west bank of the Rhine, forming a kind of semicircle. The city is fortified, and with its numerous spires and large buildings makes a good show from the opposite side of the river. It is about one hundred and seven miles east by north from Brussels. Cologne was an old Roman station often mentioned in Tacitus, and took its name of Colonia Claudia Agrippinensis, or "the colony of Claudius and Agrippina." The Roman word "colonia," *colony*, has been corrupted by the French into Cologne, and by the Germans into Cöln.

Under the Germanic empire, Cologne was a free imperial city, and had both a seat and voice as well in the diets or assemblies of Westphalia as in those of the empire. At this time the elector of Cologne occasionally resided here, as well as the chapter of the archbishop of Cologne and a nuncio of the pope. Urban VII. established a university here in 1388, to which succeeding popes granted privileges. It is still the seat of a catholic archbishopric, but the university as such no longer exists.

Cologne can not on the whole be called a handsome city, its streets being crooked, narrow, and dirty; but it has a great number of public buildings, and among them thirty-three churches and chapels. The

population in 1830 was 65,145. The cathedral is a noble building, 400 feet long and 180 wide, which, owing to its magnitude, is a conspicuous object from a distance, overtopping every other edifice in the city. The body of the cathedral is supported by 100 pillars. Two high towers were designed for this building, one of which is raised to only about half the height intended, and the other is hardly begun. Were the cathedral completed, it is generally allowed it would be one of the finest gothic buildings in Europe. Behind the high altar is the chapel of the three holy kings, or three wise men, as they are sometimes called, made of marble; the shrine which contains the bodies is remarkable for the curious and elaborate ornaments with which it is decorated. The names of the three wise men, according to some accounts, are Gaspar, Melchior, and Balthasar, whose bones, as the story goes, were first taken to Constantinople by the emperor Constantine's mother; thence they were transferred to Milan; and finally obtained a sumptuous mausoleum in Cologne. What the precise merits of Gaspar, Melchior, and Balthasar, were, we have not been able to make out satisfactorily. The parish church of St. Peter contains the crucifixion of the apostle, one of Rubens's finest pictures, which he gave as a present to the church in which he received the rite of baptism. This distinguished painter was a native of Cologne. The picture travelled to Paris during the time when the French were so busy in appropriating to themselves all the valuable works of this kind which they could lay their hands on: after the downfall of Bonaparte it returned home.

In the church of St. Ursula we see the tomb of this holy Virgin, and, as the legend would have us believe, the bones of her 11,000 virgin companions and martyrs: the church does in fact contain an immense number of bones, and in a certain chamber, some accounts say, there are, or were, several thousand skulls, arranged in good order and adorned with garlands and coronets. The fact of the bones being there seems undoubted, the proof of their belonging to the holy virgins does not seem quite so clear.



Church of St. Martin, Cologne.

Besides these there are many other handsome churches in Cologne, one of which, the church of St. Martin, is represented in our engraving. This view is given, not so much for the beauty of the church, as to exhibit the general style of architecture in this old city.

The townhouse has a fine portal formed by a double row of marble pillars. The old Jesuits' college, an extensive building, now contains a gymnasium or high school, with a library, a seminary for priests, and a valuable collection of old German paintings.

The situation of Cologne makes it a place of considerable trade, particularly with the German town of Frankfort-on-the-Main and Holland. In 1822, 4,415 vessels of various sizes arrived at the town, and 2,832 left it. The manufactures of Cologne are considerable; twenty-five tobacco manufactories, cotton, silk, and woollen wares, earthenware, soap, candles, &c.; and Cologne water, or *Eau de Cologne*, as it is commonly called, which is said to be made at twenty-four different establishments. The virtues of this water must be well known to all our readers; but if they have still any doubts on the subject, it is only necessary to read the printed French advertisement, which generally accompanies the bottle, and it is impossible to dispute the virtues of the commodity which the manufacturers extol so highly. A great deal of brandy is made at Cologne. The book manufactory of the town employs eighteen establishments and forty-two presses.

The public library of 60,000 volumes, the botanic garden, the school for the deaf and dumb, the various collections and cabinets, the hospitals, &c., are such appendages as we usually find in an old continental town. There is a bridge of boats over the river, which at Cologne is about 1,250 paces wide, connecting the city with the opposite town of Deutz.

LITERATURE.—The study of literature nourishes youth, entertains old age—adorns prosperity, solaces adversity—is delightful at home, unobtrusive abroad—deserts us not by day nor by night, in journeying nor in retirement.

GEOLOGY.

ORGANIC REMAINS.—TRANSITION ROCKS.
—COAL FORMATIONS.



N the primary rocks few indications of organized beings occur, all traces of these having been in general destroyed by the changes these beds have undergone. When we consider that they were originally the bottom of the ocean, that there they were covered by a vast mass of similar deposits, that then they were invaded by intense heat, reducing them almost to a fluid state, and that finally they have been elevated into the loftiest mountains on the globe; we may rather wonder that any remains of animals should be found in them, than that these should be so few and imperfect. With the transition beds a new state of things begins. Organic remains appear, sometimes in considerable abundance, and continue in an uninterrupted series down to the most recent formations. The first person who is recorded to have observed these organic remains in rocks is Xenophanes of Colophon, an old Greek philosopher, who, finding impressions of fishes in the limestone quarries near Syracuse, drew the natural conclusion that these rocks were productions of the sea, which must once have covered the place where they were found. Herodotus, the father of profane history, made the same remark in reference to Egypt, where shells often occur far from the present limits of the Mediterranean. For many ages, no further progress was made in a knowledge of these bodies, or their true scientific value, and even in the end of last century, Voltaire, in order to discredit the support they were supposed to give to the history of the Mosaic deluge, ventured to affirm that those found in the Alps had been brought thither by accident. The learned observations of Cuvier on the fossils found in the quarries near Paris, and the discovery of William Smith, that particular strata were characterized by certain fossils, and could be known from these in distant places, first showed the importance

of this study, and the new light it was fitted to cast on geology.

Organic remains occur in various states. Some are wholly converted into stone, being those properly named petrifications; others are little changed from their condition when forming part of a living body. Shells and bones are the best preserved and the least altered. Plants are often completely carbonized, when they appear like a dark-colored engraving on the stone in which they are enclosed. Many varieties of fossil wood are converted into flint, others into carbonate of lime, others into iron ore, and in some the process is only half completed, part being changed, part retaining its original character. Even where the whole has become solid stone, it is singular to find the texture of the wood preserved, the most minute vessels and fibres of the plant being visible in thin slices when magnified. In this manner, the class of plants to which these fossil trees belonged has been determined, though none of the most marked parts, the fruit, or flower, or leaves, remained. The variety, both of plants and animals, which have thus been preserved is very remarkable, and proves that all the great classes of both kingdoms had their representatives even in these early periods. It is also important to observe, that some genera have continued to exist during the whole series of geological revolutions, thus proving the unity of the system of the globe throughout the whole of these changes.

The transition rocks are the earliest fossiliferous beds known, and on this account are by some authors named protozoic, a word indicating that in them living beings first appear. The lower part of the formation consists of a great mass of argillaceous rocks, the finer varieties being clayslates, while the coarser are named greywacke. In Europe, Asia, and America, rocks of this formation, with characteristic fossils, have been found. These fossils are most abundant in the lime-stones, and are principally shells and corals. Some of the earliest beds, however, are impressed with the form of worms, which have left their slimy track, as it were, engraven on the solid rock, and thus, notwithstanding their soft and fragile texture, produced an imperishable

record of their existence. Another remarkable class of fossils in these ancient beds is the trilobites, so named from their body being often, as it were, divided into three lobes. There is no living representative known of this class of animals, which seem then to have been very numerous in many genera and species. They are, however, thought to have belonged to the crustacea, or those animals covered with a shelly crust like our present crabs and shrimps. It is also curious, that in some species the eyes, those most delicate of all organs, have been preserved, converted into calcareous spar, and exhibit a structure closely corresponding to those of some living animals. The remains of plants are far from numerous in this formation, but this is no proof that they did not then exist, as these beds seem to have been deposited in the deep ocean at a great distance from the shore.

A very common igneous rock in this formation is felspar porphyry. It is frequently of a red color, and consists of a compact mass of felspar in which small distinct crystals of the same mineral appear imbedded. This rock sometimes forms whole hills, but more frequently beds or veins intersecting the strata. It seems to represent the granite of former rocks, and in some cases can not be distinguished from it. This porphyry has been much valued for ornamental purposes, some of the finest antique vases being cut out of it, and it is still manufactured into similar articles, especially at Elfdal in Sweden. The mines wrought in many transition districts are, not improbably, connected with the same igneous agent. The lead ore here contains a small proportion of silver, though not enough to pay for its extraction, and small fragments of gold are often found in the neighboring rivulets. In the Hartz mountains, many mines of silver are wrought in this formation, and iron-ore is found in immense beds. Even in the Altai mountains, in Asia, it retains this character, the richest silver mines being found in a red porphyry in clayslate.

In Scotland, this group of rocks is separated by a very distinct line from those that follow. They not only differ in mineral character and appearance, but

must also have been divided by a considerable interval of time. All beds deposited from water must originally have been nearly horizontal. But this is no longer the position of these transition strata. They have been turned up on edge and apparently crushed together, bent or folded over in the most singular manner. And this has happened previous to the formation of the next or secondary rocks, which rest on them almost in a horizontal or slightly inclined position. The importance of this fact was first observed by Dr. Hutton, who saw in it a proof that no period in the world's history had been exempt from change, and that the rocks forming the earth's crust did not compose one continuous series, but had been liable to interruptions. The secondary rocks have been divided into various systems, principally from the fossils found in the different beds. Each group of plants and animals is supposed to have continued during a certain period, when some change in the condition of the earth's surface caused many of the species or genera to perish, whose place being filled up by the creation of others, a new world of animated beings was the result. Each group of organic beings, therefore, characterizes the beds which were formed during the period when it existed, and is only found in these. Though many exceptions to this occur in fossils continuing to exist through several systems of beds, still it is found to be generally applicable, and the secondary deposits, both of the eastern and the western continent, are classed on this principle. For the sake of clearness, we subjoin the table of English formations, as given by Mr. Murchison, only reversing the order, the lowest beds being placed first on the list, in conforming to the arrangement we shall follow in describing them:—

Devonian or old red sandstone.
Carboniferous or coal formation.
Permian or magnesian limestone.
New red sandstone or trias.
Oolitic or jurassic system.
Wealden (fresh water).
Cretaceous or chalk formation.

The first of the above formations is the old red sandstone, which has been named the Devonian system, from being found in

great abundance in the county of Devon. Its most characteristic beds are vast masses of red sandstone, with others of coarse conglomerate, composed of rounded blocks, often of the primary rocks. These are of all sizes, from several feet or even yards in diameter down to the fine sand in which the whole are enclosed, and show, by their form, that they must have been long rolled about in the waters of the ocean. Some beds of the sandstone are gray colored, while others are of a marly or clayey nature. Beds of coarse limestone or cornstone are also mixed with it. These rocks are evidently formed from the destruction of other previously existing rocks, and from their extent, and the size of the fragments, imply a period of great and very violent convulsion. It was, therefore, hardly to be expected that any remains of plants or animals should have been preserved in them, and till very lately this was supposed to be the case. Now, however, fishes are found to have lived then, in great numbers, and the remains of more than fifty species have been observed in rocks of this age in Scotland. These fishes are all different from those that now inhabit the ocean, and have possessed very singular forms. One of them, found in the red sandstone of Forfarshire, has its head covered with a kind of buckler, and has been hence named the cephalaspis. Another, of which the most perfect specimen was obtained from a quarry near the Tay, is covered with beautiful polished and channelled scales, and has been named the holoptychius. A third genus, with many species, is the pterichthys, which appears as if furnished with wings. So unlike are these creatures to any now existing, that it was at first doubtful to what class of animals they should be referred. The question has been principally decided by the researches of Agassiz, a Swiss naturalist, which have added many hundred species to the fossil fishes formerly known. In the United States, fossil fishes have been found in the sandstone formation of Connecticut; and the secondary and tertiary strata which border the seacoast from New Jersey southward, often furnish the teeth and scattered vertebrae of sharks, with other marine remains. Fossil fishes have

recently been found in the Virginia coal-basin near Richmond, in rocks of the sandstone formation, two hundred feet below the surface.

The lowest beds of the carboniferous system are those named the mountain limestone. The most distinguished rock of this class is a dark gray or blackish limestone, which contains many fossils, especially encrinurites, a variety of radiated animals. The parts of these which remain are principally a long jointed stalk with a hollow centre, often described as the backbone of a fish, which it much resembles. This stalk bore a crown, consisting of many pieces, and dividing into several branches, somewhat resembling a flower or open lily. In other beds, the remains of fishes and of numerous plants appear. In some parts of England, this formation, which is mixed with beds of slate-clay and sandstone, contains rich mines of lead, and along with this metal, in Derbyshire, also ores of copper, zinc, iron, and manganese. In the north of England it contains many beds of coal. Like other limestone rocks, caverns are frequently formed in it of great extent, Peak's Hole, in Derbyshire, being upward of two thousand feet long, and in one place a hundred and twenty high.

Above this is the true coal formation, in some respects the most interesting and important of all. It consists of innumerable beds, mostly of sandstone mixed with slate-clay or shale. The sandstone is generally white or gray, but sometimes light red; the shale is black or brown, and often very bituminous, when it burns like coal. The most important beds are, however, those of coal, though they seldom form a tenth part in thickness of the whole deposit. That this substance is of vegetable origin seems now placed beyond dispute, both the remains of plants found in it and by the woody fibrous texture seen by the microscope in many parts of it when cut into thin slices. Several theories have been formed regarding the manner in which the vegetable matter has been converted into coal. Some think that vast masses of trees and other plants have been carried down into gulfs or bays by rivers, as is now happening in the Mississippi and other large American

streams, where, having sunk to the bottom and been covered by sand and mud, they underwent a kind of fermentation, which was so modified by the immense pressure as to convert the woody matter into coal. Others regard this mineral as principally produced from marine plants, similar to those which occur in immense banks in some parts of the ocean. Others again think that it has been formed from forests growing nearly on the level of the sea, which have first been changed into marshes or mosses, and then submerged below the water, and covered with beds of clay and sand. It is not improbable that coal may have been formed in all of these ways, either separately or combined. A strong argument in favor of the last view is furnished by the trunks of trees, which have evidently grown upon the dry land, found in this formation. At Granton quarry, near Edinburgh, a tree of this kind is now exposed, nearly sixty feet long, and in some parts five feet in diameter. Similar trees are seen in Craigleith quarry, of smaller dimensions, the wood of which shows a great resemblance to that of the *auracaria* or New Holland pine. These trees might have been floated to the spot where they are now discovered, but others have been seen standing erect, and apparently with their roots extending into the rock. Three trees, in this position, were seen in the banks of the Esk, near Penicuik, and several others have been observed in the vicinity of Glasgow. These facts seem to show that these trees remain in the places where they grow, though it is difficult to conceive of a large tract of ground, of many hundred square miles, alternately sunk below and raised above the level of the ocean.

Many other varieties of fossil plants occur in this formation. The most beautiful are some species allied to recent ferns, from which a few can hardly be distinguished. About a half of all the plants found in the coal strata belong to this class, and many of them, with thick stems from fifteen to twenty feet or more long, probably to species of tree-ferns, like those now growing in tropical regions. Another class are the calamites, which seem to have resembled the mare's tail or *equisetæ* of the present day, though far

surpassing them in size. They have a jointed and furrowed stem, some inches in diameter, and occasionally several yards long, which is often covered as it were with a bark of coal, while the inside is changed into sandstone. The lepidodendra, whose surface appears as if covered by scales, are another class of giant representatives of diminutive plants of the present day, the small club moss of our heaths. Almost all the large stems in the coal formation were at one time described as belonging to palms, but plants truly of this nature are now found to be very rare. Still the character and size of the plants now mentioned prove that the state of vegetation then has been very different from what it now is in Europe, though not unlike that described by some recent travellers in the temperate parts of South America. It is therefore probable that the climate of our own and the surrounding countries was at that time considerably warmer than we now experience it, though the proof of this is less satisfactory than many have imagined. Animal remains are not numerous, and are principally shells or fishes of extinct species. It is remarkable that many of the shells, which are usually compacted into thick beds, belong to the genus unio, which lives in fresh water, while others are no less distinctly natives of the sea.

The coal formation is very widely extended in the northern parts of Europe and the United States. In the former it is most abundant in Britain and in Belgium, becoming rarer in France and all the southern countries. In Britain it is estimated as covering a twentieth of the surface, whereas in France the proportion is only a two-hundredth part. In the United States, it is found in vast abundance, covering the whole valley of the Ohio and the country west of the Mississippi, in immense basins, surpassing the whole island of Great Britain in extent. In these deposits several of the fossils are the same with those found in Europe. In South America, it appears even on mountains eight or ten thousand feet above the sea. It has also been discovered in Hindostan, China, and New Holland, though the identity in age of formations, so widely separated, seems problematical.

Coal consists of carbon, with various proportions of hydrogen, nitrogen, and oxygen, mixed with earthy matter. There are several varieties of it, distinguished both in composition and in appearance. Common coal breaks into cubical or slaty fragments, and has a resinous lustre. Pitch coal is more compact and shining, while the channel or parrot coal, from which gas is usually made, is of a duller aspect and grayish-black color. Anthracite or blind coal burns without flame, and seems to be some of the former varieties deprived of their bitumen by heat. It is occasionally found in this country near igneous rocks, and in great abundance in Pennsylvania. The coal is dug by mines, sometimes of great depth and extent, especially in the district round Newcastle. In these the workmen are exposed to much danger from the roof of the pits falling upon them, and, especially from choke-damp and foul air, as they are named by the miners. The former is the carbonic acid gas, which being heavier than common air, accumulates in the lower parts of the pit, and soon extinguishes the lights and destroys life in those involved in it. The foul air or light carburetted hydrogen is identical with marsh gas, and is exceedingly inflammable when mixed in certain proportions with oxygen. It then catches fire on the approach of a flame, and explodes almost like gunpowder, destroying all the walls and partitions in the pit, burning the unfortunate miners, and blowing everything in the shafts into the air. Sometimes above a hundred people have perished in a moment by one of these explosions. It was such a catastrophe which gave rise to the experiments of Sir Humphry Davy, which ended in the discovery of the safety-lamp, one of the many gifts of science to man, and the means of saving many valuable lives. These dangerous gases do not occur in all pits, but often burst out from cavities in the coal, altogether unexpectedly, and unless the miners are on their guard, cause their instant destruction.

It is a remarkable circumstance that beds of iron-ore are mixed up with the coal, and the two are often so close together that both can be wrought at once. In the Scottish coal-field, these bands of

iron-ore are very numerous, in one section, near Glasgow, more than sixty being known. This arrangement gives double value both to the coal and iron, and is undoubtedly an important element in the manufacturing prosperity of that country. Limestone, which is needed as a flux to melt the iron-ore, is also at hand, in the formation on which this immediately rests. This union of these important minerals is so essential to the interests of man, that anything more adapted to promote them can scarcely be conceived. Yet no merely natural reason can be assigned for it; there is no physical cause that can produce it; for aught we perceive, the iron ore might as well have been placed in the midst of the primary mountains, far from the coal by which it was to be reduced. Is it unreasonable, therefore, to believe that the wants of man were foreseen and provided for ages before he had any place on the earth? Is it not rather our duty to search out these indications of our Creator's care, and to adore him for his goodness to the sons of men?

THE POLAR BEAR.



N those desolate fields of ice which lock up the polar seas during a great part of the year, the White Bear (the *Ursus Maritimus* of Lianzeus) finds an abode congenial to his hardy nature. Prowling over the frozen

wastes, he satiates his hunger on the marine animals, such as seals, who break through the ice to breathe the open air; or he plunges into the sea in pursuit of his prey. Possessing an astonishingly acute scent, great activity and strength, and equal cunning, he contrives to support existence in regions where it might be thought that so large a quadruped must necessarily perish. Ever watchful, he ascends the hills of ice, called hummocks, to extend his range of observation over the wide plain where a solitary seal may perhaps be resting; or to snuff the tainted

air, by which he knows that some remains of a whale, or a walrus (sea-horse), deserted by the fishermen of Europe, or the native Esquimaux, will afford him an ample feast. He doubtless often suffers long and extreme hunger; for the seal, which forms his chief subsistence, is as vigilant as the bear; and he is often carried out to sea upon some small island of ice, where he may remain for days without the possibility of procuring food. The polar bear has been seen floating in this way at a distance of two hundred miles from any land. Swimming excellently, he, however, often travels from one island of ice to another; or visits the shore, where he commits fearful ravages. In Iceland, where these destructive animals sometimes land, the inhabitants immediately collect together to destroy them. Near the east coast of Greenland, according to Captain Scoresby, in his account of the Arctic regions, they have been seen on the ice in such quantities, that they were compared to flocks of sheep on a common.

The animal is ordinarily from 4 to 5 feet high, and from 7 to 8 feet long, weighing from 600 lbs. to half a ton. Barentz, an early voyager in these regions, killed two enormous white bears in 1596, the skin of one of which measured 12 feet, and that of the other 13 feet. The polar bear generally retreats from man; but when attacked he is a formidable enemy.

The sagacity of the polar bear is well known to the whale-fishers. They find the greatest difficulty in entrapping him, although he fearlessly approaches their vessels. The following instances of this sagacity are very curious:—

“A seal lying on the middle of a large piece of ice, with a hole just before it, was marked out by a bear for its prey, and secured by the artifice of diving under the ice, and making its way to the hole by which the seal was prepared to retreat. The seal, however, observed its approach, and plunged into the water; but the bear instantly sprung upon it, and appeared, in about a minute afterward, with the seal in its mouth.

“The captain of one of the whalers being anxious to procure a bear, without wounding the skin, made trial of the



Polar Bears and Seal.

stratagem of laying the noose of a rope in the snow, and placing a piece of kreng within it. A bear, ranging the neighboring ice, was soon enticed to the spot, by the smell of burning meat. He perceived the bait, approached, and seized it in his mouth: but his foot, at the same moment, by a jerk of the rope, being entangled in the noose, he pushed it off with the adjoining paw, and deliberately retired. After having eaten the piece he carried away with him, he returned. The noose, with another piece of kreng, being then replaced, he pushed the rope aside, and again walked triumphantly off with the kreng. A third time the noose was laid; but, excited to caution by the evident observation of the bear, the sailors buried the rope beneath the snow, and laid the bait in a deep hole dug in the centre. The bear once more approached, and the sailors were assured of their success. But Bruin, more sagacious than they expected, after snuffing about the place for a few moments, scraped the snow away with his paw, threw the rope aside, and again escaped unhurt with his"

The female polar bear is as fierce in her hostility as the male; but nothing can exceed the affection which she feels for her young. The difficulty of procuring food for them, and the hardships to which they are exposed, no doubt call forth this quality. Some of the instances upon record are as singular as they are affecting. The following is related in one of the polar voyages:—

"Early in the morning, the man at the mast-head gave notice that three bears were making their way very fast over the ice, and directing their course toward the ship. They had probably been invited by the blubber of a Seahorse, which the men had set on fire, and which was burning on the ice at the time of their approach. They proved to be a she-bear and her two cubs; but the cubs were nearly as large as the dam. They ran eagerly to the fire, and drew out from the flames part of the flesh of the Seahorse, which remained unconsumed, and ate it voraciously. The crew from the ship threw great pieces of the flesh, which they had still left, upon the ice, which the old bear carried away singly, laid every piece before her cubs,

and dividing them, gave each a share, reserving but a small portion to herself. As she was carrying away the last piece, they levelled their muskets at the cubs, and shot them both dead; and in her retreat, they wounded the dam, but not mortally.

"It would have drawn tears of pity from any but unfeeling minds, to have marked the affectionate concern manifested by this poor beast, in the last moments of her expiring young. Though she was sorely wounded, and could but just crawl to the place where they lay, she carried the lump of flesh she had fetched away, as she had done the others before, tore it in pieces, and laid it down before them; and when she saw they refused to eat, she laid her paws first upon one, and then upon the other, and endeavored to raise them up. All this while it was piteous to hear her moan. When she found she could not stir them, she went off, and when at some distance, looked back and moaned; and that not availing to entice them away, she returned, and smelling around them, began to lick their wounds. She went off a second time, as before, and having crawled a few paces, looked again behind her, and for some time stood moaning. But still her cubs not rising to follow her, she returned to them again, and with signs of inexpressible fondness, went round first one and then the other, pawing them, and moaning. Finding at last that they were cold and lifeless, she raised her head toward the ship, and growled her resentment at the murderers, which they returned with a volley of musket-balls. She fell between her cubs, and died licking their wounds."

VIRTUE.

GUARD well your heart. Shut up every crevice by wholesome thoughts, and the evil atmosphere by which thou art surrounded will never enter. He who would tempt thee for one moment to turn aside from the path of truth, must receive no favors from thy hands. Slumber not when evil associates are pressing to thy side. To be virtuous is to be respected; to be respected is to be happy; to be happy is to be good.

THE WIFE OF LAFAYETTE.



HE faithful and devoted wife of General Lafayette was a daughter of the illustrious house of Noailles. She was married at the early age of seventeen, and scarcely

ly had the honey-moon glided happily away when her youthful husband left her side to fight for American Independence. During his absence, Madame Lafayette ruled her household and numerous estates with wisdom and prudence far beyond her years. At length the husband, whom she loved so dearly, and of whom she was so justly fond, returned covered with glory to lay his laurels at her feet. Some few happy days were spent together, and then the storm cloud of the French revolution broke over their heads. Her husband was soon driven to exile, but it was thought that Madame Lafayette, living quietly and in great retirement on her estate in Auvergne, ran no danger. But her love of liberty, her high rank, her talents, made her an object of suspicion. She was arrested on the 10th of August, and soon after sent to Paris. Her mother, grandmother, and sister-in-law, all perished on the same scaffold. Madame de Lafayette herself was in daily expectation of death. She made her will, and waited calmly and resolutely for the summons to the guillotine. The revolution of the 9th Thermidor preceded by five days that appointed for her execution. As soon as she was liberated she sent her only son, then in his childhood, to the care of General Washington, after whom he had been named; and then hastened with her two daughters to find her unfortunate husband—then languishing in an Austrian prison. She reached Vienna by means of an American passport, obtained an audience of the emperor, and solicited either the release of her husband, or permission to share his captivity.

"As to the release of General Lafayette," replied the emperor, "it is a very complicated piece of business; on that point, my hands are tied."

Madame Lafayette joyfully embraced

the other alternative—that of sharing her husband's gloomy prison. Sixteen months close imprisonment in France, the loss of her kindred, her continual anxiety respecting her husband, had combined to affect her health—which declined so rapidly in her damp prison at Olmutz, that serious apprehensions were entertained for her life. Feeling the importance of her life to her family, and at their earnest solicitation, she wrote to the emperor to request his permission to spend a week in Vienna for change of air, and for the purpose of consulting a physician. Her letter remained two months unanswered, and then came an imperial mandate, forbidding her ever to appear in Vienna, but offering her freedom—on condition that she would never seek to return to her husband's prison. Madame de Lafayette's noble and touching answer to this inhuman prostitution, fortunately for posterity, remains on record. It was as follows:—

"I owed it to my family and my friends, to make some efforts for the preservation of my life; but they know me too well to suppose, for a moment, that I would accept it at such a price. I can not forget that when we were on the point of perishing, my husband, by his physical and mental sufferings in Austria, and I, by the tyranny of Robespierre, in France, was not allowed to receive any communication from him, nor to inform him in return that his wife and children were still in existence; and I will never, of my own free will, expose myself to the agony of separation from him again. However unsuitable this residence may be to my daughter, and however unfavorable to my health, we will gladly avail ourselves of his imperial majesty's goodness in allowing us to remain here, and will never trouble him with any more petitions."

From that time Madame de Lafayette made no further efforts, but bore her sufferings firmly and patiently, until the victories of the French republic, and especially those of General Bonaparte, changed the aspect of the affairs. General Lafayette was restored to freedom, and with his devoted wife, returned to his native country, and fixed his residence at La Grange—the maternal inheritance of his wife—an estate situated about twelve

leagues from Paris. Here Madame de Lafayette spent the remainder of her short life in the bosom of her family. But the poisoned arrow of grief and anxiety had drank her life blood, and after many lingering months of suffering, this affectionate mother and heroic wife closed her pure and exemplary life on the 24th of December, 1806. Posterity has covered the name of General Lafayette with glory, but surely the patient endurance, the self-sacrificing devotion of his noble wife, deserve an equal meed of praise.

INTOLERANCE.



GREAT deal is said and written, and declaimed at the present day, about the intolerance of which the last age has been proved guilty in two or three no-

table instances. Tirades have been written by the score, against the suspension of witches, and the persecution of the baptists and quakers, and our fathers have been branded as the most intolerant self-conceited bigots that ever set up their own doctrines and opinions, to the exclusion of every other. With all these conspicuous and barbarous examples before us, and barbarous we admit them to be—we still hesitate not to affirm that there is quite as much intolerance in the world, and among ourselves even, at the present moment, as ever existed in any former period of the world's history. This may seem a bold assertion to those who look only at the mask and superficialities of society; but he who has sounded the depths and shoals of human nature, will find, if we mistake not, this error the deepest fixed, and the last to be eradicated, of all which lurk and thrive in that sea of depravity—proud, selfish, wealth-seeking, error-loving man. True, the ordeal and the stake no longer exist as its prime ministers; these belonged to an age and custom that has passed away; yet the principle remains

as strongly predominant as when those symbols figured and blazed on every common. Mankind, ever the slave of custom, obeys implicitly the changing forms of society, and models his practice according to the age in which he lives.

To illustrate more particularly the force of these remarks—how many are there, who denounce unheard, every new science, or doctrine, or theory, for the sole reason that they conflict with their accustomed views and prejudices. How many who are not even capable of understanding the claims of a system, much less of weighing them by the principles of sound reason, scout at once the profoundest theories as visionary and absurd, and libel their advocates with the foulest epithets of derision and reproach. One would suppose that such persons were possessed of extraordinary insight and powers of reasoning; that they could penetrate, and were familiar with the remotest laws of nature and mind; yet come to inquire into the causes of their far-sighted wisdom, and plenty of gall, and tirade, and declamation, you shall see showered on all sides, but not one word of reason. What one man out of five hundred who takes a side in politics, and rants and declaims so vehemently, understands thoroughly one fundamental principle of government or political economy?

Is this the age of toleration? Show us one liberal, honest-minded man, who is not the slave of opinion or prejudice, and who weighs every subject by the impartial dictates of enlightened reason, and you have found a jewel which the world, alas, too seldom contains.

Intolerance is only unjust, but foolish and impolitic. It more than any other, is a zeal which defeats its own ends. Every speculative system, like the shield of olden fable, has its golden, as well as its dark side. No error even, that boasts of many advocates, but has some "show" of truth; and the surest, indeed the only way of convincing an opponent, is by meeting him on his own grounds, by showing him that you have seen the disputed subject, in the same point of view as himself, and are capable of appreciating the good as well as the evil of his system. Above all, convince by "reason." For no other pur-

pose was this best and holiest faculty bestowed upon man, but to sift error and discover the true and the right; and he who neglects or refuses to employ this high attribute, has already sold his birth-right, and is no longer worthy of the name of man.

MOHAMMEDAN DEVOTIONS.



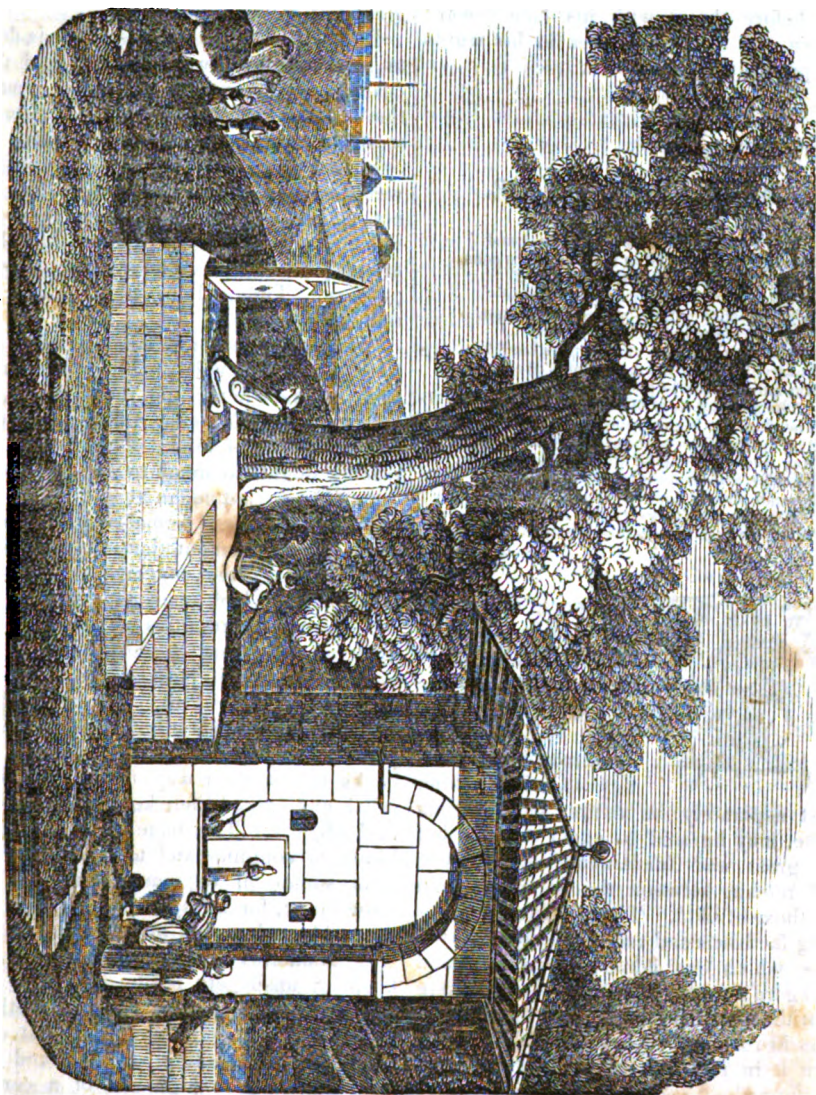
OUNTAINS, the best of which are such as that represented in our engraving, are common in Mohammedan towns; and, besides the ordinary use of assuaging the thirst of the passers-by, they, with an adjoining platform, and with an erect stone to indicate the way the worshipper should turn his face, constitute so many oratories for the use of those whom the call to prayer surprises at a distance from the mosque, or who prefer to perform their devotions in the open air. It is obligatory on all Mohammedans to pray five times a day; but it is only on the Friday that they are expected to attend at the mosque for the purpose: and in general, when a Moslem hears the call to prayers, or knows that the hour is arrived, he will perform his devotions at any convenient place near that where he happens to be at the time, after he has executed the required ablutions. These consist in washing the hands three times successively, as well as the face, the arms, the head, the neck, and the feet; and also the inside of the mouth, of the ears, and of the nostrils. It is for the purpose of these ablutions that fountains are so abundantly provided. In places where no water is to be had the ablution may be made with the earth or sand. This practice is followed by persons travelling in the deserts; and with regard to persons at sea, who have no such substitutes, and can not afford fresh water, they affect their ablutions by rubbing themselves with their hands alone, after having placed them on a stone. Sea-water is considered im-

pure, and entirely unfit for the purposes of ablution. These washings are generally performed in a very slight way. In consequence of its being necessary to wash the arm up to the elbow, the Moslems have the sleeves of their dress with buttons from the elbow to the wrist. The Turks and Arabs generally wear their sleeves loose and unbuttoned, to save the trouble of frequent unbuttoning and buttoning again; but the Persians, who are much less observant of what their religion in this respect requires, are seldom seen but with their sleeves buttoned up. Indeed, everything that their forms of worship demand, in regard to prayers and ablutions, is seldom performed by any Moslems except those of the higher and middle classes, and in all cases the morning, noon, and evening periods of prayer are the most attended to, while the intermediate ones are comparatively neglected.

Although Christians are not generally allowed to enter the mosques, the ceremonies of prayer are so much performed in the streets and open places of towns, that the most observant stranger soon becomes thoroughly acquainted with all the proceedings.

There are no bells in Mohammedan countries; but, at the appointed hours, an officer of the mosque, called the *muezzin*, mounts upon the minarets and calls the faithful to prayers, or rather notifies that the proper time has arrived. For this office the persons endowed with the most sonorous voices are chosen in preference, and the distance at which they can be heard is such as to become a subject of surprise to Europeans. This notice is not delivered from every mosque, but only from such as are sufficient to afford an equal distribution of the sound over the city. The call consists of a declaration of the Mohammedan profession of faith: "There is no other god but God, and Mohammed is the prophet of God!" with many repetitions; then follows the invitation to prayers, to which, in the morning, is added the assurance that "prayer is better than sleep;" and the whole concludes with the declaration that God is most great, and most high, and that there is no other God but him.

When the call is heard, the devout who



An Ornery or Place of Prayer.

happen to be abroad hasten to the fountains and the streams to perform their ablutions; when this is done, if there are many present, one of the number assumes the office of an imaum, or leader, and, placing himself before them, with his face toward Mecca, the rest follow him in his words and postures.

THE LOVE OF NATURE.

"Strange, there should be found
Who, self imprisoned in their proud enclose,
Renounce the odors of the open field
For the unaccented fictions of the loom—
Who, satisfied with only pencilled scenes,
Prefer to the performance of a God
Th' inferior wouders of an artist's hand!
Lovely, indeed, the mimic works of art,
But nature's works far lovelier. . . .

The air salubrious of her lofty hills,
The cheering fragrance of her dewy vales,
And music of her woods—no works of man
May rival these; these all bespeak a power
Peculiar, and exclusively her own.
Beneath the open sky she spreads the feast:
'Tis free to all—'tis every day renewed;
Who scorns it, starves deservedly at home."

COWPER.



HE poet, we think, has set this matter in its true light. Art may do much, but nature has done vastly more. The artist, indeed, may bring beauties together which exist separately in nature, and, in this sense, may be said to excel nature; but the great and fundamental distinctions still remain between the works of man and those of God. There is surely something factitious and radically wrong in the taste which can admire the mimic and disregard the real landscape—just as there is in the sympathy which weeps over distress in romance, and turns with loathing from it in real life. The poor man who has formed a taste for nature need scarcely repine that he wants a palace or a picture-gallery. He has both, and of God's own making; and if he be a Christian, he is a coproprietor with God. The roof of royalty will not bear to be named with the vaulted sky; and the sights of a palace are poor compared with those seen in the

heavens. That taste must be morbid and grovelling indeed which can prefer the former to the latter, the less to the greater, the mean to the magnificent, and, at best, the imperfect and miniature copy to the great and glorious original.

It is to be regretted that so little is done to form the taste we speak of, and that cases of sincere and devout attachment to the beauties and wonders of the external world are so rarely to be met with, not only among the unlearned, but among the wealthier and educated classes. We do not speak of pretensions, for these are numerous, but it is easy to see that they are only pretensions, and made to serve a purpose. The real lovers of nature are relatively few.

We know there are constitutional differences, which will produce differences here as elsewhere; but these might, in general, be made to be differences more of degree than of kind. The parent and teacher might do much to mend the matter. We do not mean that they should make it a stated and formal part of instruction; for the moment that many children perceive this, they conceive an aversion to what they look upon as a task. Let them have opportunities of becoming acquainted with what is great and beautiful in creation, and, if possible, let their first impressions be pleasant. Encourage them to describe what they have seen, and explain what they do not understand. Let books fall in their way, to sharpen their relish and extend their knowledge of natural objects. The taste thus formed is likely to continue, and to furnish a constant source of enjoyment through life. How many, for want of this training, are miserable, when left alone with nature! Her mountains are nothing to them but heaps of unshapely earth; and they see nothing in streams but water in motion; and hear nothing in the winds but confused and unmeaning sounds; and the trees are only so high and of a certain color; and the clouds are only interceptors of the sun's rays; and the sky is blue, or red, or green, but nothing more. They are delighted to be relieved from their dull companion, and hail the approach of a shepherd's dog, or the sound of his master's voice in the distance, as a

sweeter sound than any that nature has to give.

We rather think that the love we speak of is never strong or lasting unless it be contracted in early life. The associations of childhood are the strongest of any, and usually go with us to the grave. Hence the all-prevailing love of the place of our nativity. Perhaps few men had a finer perception of what was amiable in manners and beautiful in art than Charles Lamb; and yet, exquisite as was his sensibility here, he does not appear to have been capable of enjoying himself in the society of lakes and mountains. Byron, on the contrary, could say, and no doubt truly :—

"There is a pleasure in the pathless woods,
There is a rapture on the lonely shore;
There is society, where none intrudes,
By the deep sea, and music in its roar."

But Byron, independently of the sterner structure of his mind, had the advantage of Lamb in his early training and habits. He had conversed with nature in her moments of repose; his fancy had mingled in the ennobling stir of the elements—had drunk deep from the fountains of the hills, and imbibed the spirit of the solitary glens; he had put a tongue into the mysterious winds as they passed, and had gathered the leaves of the forest, as the leaves of the great sybil of nature. He retained this love of nature to the last, and it seems often to have been his only solace and enjoyment.

The love of nature prepares the way for the love and appreciation of the fine arts. This is an additional advantage. The discipline which the mind has undergone in contemplating the various aspects and relations of nature, predispose it to enjoy and to judge of what is excellent in certain departments of the imitative arts. It brings along with it a train of thoughts, and feelings, and associations, which readily attach themselves to what is great or beautiful, not only in painting but in poetry, and in all the higher developments of the human mind.

Its effects are not only mental, but moral also. Other things being equal, we think the man who loves the works of God is more likely to think of, and to love God himself than the man to whom these works

are matters of total indifference. The Christianity of Newton was not hurt but heightened by his frequent and earnest readings of the wonders of the visible universe. David looked up into the heavens, felt his own insignificance, and wondered all the more that God should mind man at all. Whatever teaches us our own littleness and rebukes the spirit of pride within us, brings us a step nearer God. We do not wish to lay undue stress upon this point, and we are aware that cases of an opposite kind might be urged; but what we do assert is, that, other things being morally equal, there is greater probability of the admirer of nature being brought to think of God, than there is of the person who sees neither beauty nor grandeur in the works of creation.

Besides all, it is a kind of slight which we cast upon nature—as Johnson or Addison somewhere expresses it—when we do not look at the spectacles which she is constantly varying and exhibiting to us. Has the scene been formed and the curtain drawn for nothing? or is the eye or ear unfitted to enjoy it? We think it scarcely less a pleasure than a duty to cultivate this taste in ourselves and our children. We hardly know the enjoyment we would not sooner part with than this. It is not merely that the senses are gratified, but the feelings are refined and the heart improved by it. The effect of a moonlight scene on the mind which is ill at ease, is well known. The imagination, too, is necessarily exercised and strengthened by the unceasing analogies which are constantly offering themselves between what is spiritual and what is material. But whoever may despise or forget these things, it is least of all the part of the Christian to do so. The volume of nature is as truly the work of God as that of providence or revelation. The great Teacher habitually illustrated the one by the other; he stereotyped his doctrines in the flowers, and trees, and hills.

It may be added, that the lover of nature has a better chance of enjoying a sound mind in a sound body. This is no mean consideration.

The most ardent admirer of nature need be in no fear of exhausting her stores, or draining out her vast resources. The

changes of weather, the rising and setting sun, the play of the clouds, the revolution of the seasons, the alternations of heat and cold, and night and day, and drought and moisture, and the unceasing diversity of light and shade to which these give rise, preclude the possibility of entailing a sense of sameness or insipidity on the oldest or most diligent observer. As if to guard against this result, the surface of the earth itself is thrown into the most varied forms.

Independently, however, of the actual differences and dissimilarity in scenery, and apart from the variety of individual form and of combination which are met in the same kinds of it, whether of the calmly beautiful or sternly sublime, there is a constant vicissitude and change passing over the prospect which we daily see, that goes far to prevent that feeling of monotony which we might otherwise experience. The warm rich hues of the south and the cold harsh tints of the north alternately rest upon it. It smiles and frowns, is gay or serious; and the gayety or pensiveness of to day is not the liveliness or sedateness of to morrow—capricious at one time as a Cleopatra, and steadfast as a Penelope at another; and yet that constancy or versatility is never exactly alike, but different in detail and in general effect. The unskilful eye may see no difference, but the initiated does. The experienced shepherd can discriminate between the faces of his sheep; the musician feels the slightest flaw in tone, or time, or in general balancing and expression; and the accomplished artist at once detects what is false in color or faulty in form.

We can not but think, in whatever light we consider the subject we have touched upon—that there are many and strong reasons for dismissing the neglect with which we generally treat it—whether we look to the place which we occupy in creation, or to the relations which we sustain to the Creator, or to the kindness he has shown in making “all nature beauty to the eye and music to the ear”—or whether we regard the pleasurable emotions, refinement of mind, and health of body, which we derive from a frequent and earnest intercourse with the beauty

and grandeur of the external universe. At any rate we feel well assured that the Christian is not justifiable in neglecting to cultivate an acquaintance with the “manifold works of God,” for “in wisdom he has made them all, and his tender mercies are over all his works;” and they serve at once to illustrate his attributes, his providence, and his grace.

AUGUST.



AUGUST, so called in compliment to the celebrated Roman emperor Augustus; and by the Anglo-Saxons, *Arn-Monat*, intimating that

this was a month for filling the barns with the products of the land. *Arn* is the Saxon word for harvest.

In the beginning of this month the weather is still hot, and usually calm and fair. What remained to be perfected by the powerful influence of the sun, is daily advancing to maturity. The farmer now sees the principal object of his culture, and the chief source of his riches, waiting only for the hand of the gatherer. Of the several kinds of grain, rye and oats are usually the first ripened; but this varies, according to the time of sowing, and some of every species may be seen fit for cutting at the same time.

Every fair day is now of great importance; since, when the grain is once ripe, it is liable to continual damage while standing, either from the shedding of the seeds, from the depredations of birds, or from storms. The utmost diligence is therefore used by the careful husbandman to get it in, and laborers are hired from all quarters to hasten and complete the work.

The pleasing harvest scene is beheld in its perfection only in the open-field countries, where the sight can take in at once an uninterrupted extent of land waving with grain, and a multitude of

people engaged in the various parts of the labor. It is a prospect equally delightful to the eye and the heart, and which ought to inspire every sentiment of benevolence to our fellow-creatures, and gratitude to our Creator.

In a late season, or where favorable opportunities of getting in the harvest have been neglected, the grain on the ground often suffers greatly from heavy storms of wind and rain. It is beaten to the earth, the seeds are shed, or rotted by the moisture; or, if the weather continues warm, the grain grows, that is, the seeds begin to germinate and put out shoots. Grain in this state is sweet and moist; it soon spoils on keeping; and bread made from it is clammy and unwholesome.

The rural festival of harvest-home is an extremely natural one, and has been observed in almost all ages and countries. What can more gladden the heart than to see the long-expected products of the year, which have been the cause of so much care and anxiety, now safely housed, and beyond the reach of injury?

The poor laborer, too, who has toiled in securing another's wealth, justly expects to partake of the happiness. The jovial harvest supper cheers his heart, and prepares him to begin without murmuring the labors of another year.

FIRMNESS OF CHARACTER.



HERE is no trait in the human character so potential for weal or woe, as firmness of purpose. It is wonderful to see what miracles a resolute and unyielding spirit will achieve. Before its irresistible energy the most formidable obstacles become as cobweb barriers in its path. Difficulties, the terror of which causes the pampered sons of ease and luxury to shrink back with dismay, provoke from the man of lofty determination only a smile. The whole history of our race—all nature, in-

deed—teems with examples to show what wonders may be accomplished by resolute perseverance and patient toil.

It is related of Tamerlane, the celebrated warrior, the terror of whose arms spread through all the eastern nations, and whom victory attended at almost every step, that he once learned, from an insect, a lesson of perseverance, which had a striking effect on his future character and success. When closely pursued by his enemies—as a contemporary tells the anecdote—he took refuge in some old ruins, where, left to his solitary musings, he espied an ant tugging and striving to carry away a single grain of corn. His unavailing efforts were repeated sixty-nine times, and at each several time, so soon as he reached a certain point of projection, he fell back with his burden, unable to surmount it. But the seventieth time he bore away his spoil in triumph, and left the wondering hero reanimated and exulting in the hope of future victory.

How pregnant the lesson this incident conveys! How many thousand instances there are in which inglorious defeat ends the career of the timid and desponding, when the same tenacity of purpose, the same unflinching perseverance, would crown it with triumphant success.

Resolution is almost omnipotent. Sheridan was at first timid, and obliged to sit down in the midst of a speech. Convinced of, and mortified at, the cause of his failure, he said one day to a friend, "It is in me, and shall come out." From that moment he rose and shone, and triumphed in a consummate eloquence.—Here was true and moral courage. And it was well observed by a heathen moralist, that it is not because that things are difficult that we dare not undertake them. Be then bold in spirit. Indulge no doubts, for doubts are traitors. In the practical pursuit of our high aim, let us never lose sight of it in the slightest instance; for it is more by a disregard of small things, than by open and flagrant offences, that men come short of excellence. There is always a right and a wrong; and if you ever doubt, be sure you take not the wrong. Observe this rule, and every experience will be to you a means of advancement.

FRIENDSHIP.



OW dear a gem is friendship. It sweetens the bitter cup, and it smooths the thorny path of life. How pleasing the idea, how animating the thought, that we have friends. How much to be prized is a true friend in whom we may always confide.

But some may ask, who are my friends, and how may I know them? Let me ask, how did the man, that fell among thieves, know which was his friend? You would readily answer, the Samaritan, because he showed mercy.

A true friend, whose heart is drawn out in sympathy for those around, who is ready to speak a word of consolation to the afflicted, and whose hand is ready to administer relief without expecting recompense, is to be prized above the sparkling gems of earth.

But a false friend is more to be dreaded than an avowed enemy; for we know the design of an enemy is to injure, but a false friend is like a serpent coiled in the grass, lying in ambush for its prey, and its unhappy victim is ensnared before he is aware that danger is near. Some will be our friends while prosperity blooms along our pathway; then all goes on pleasantly and harmoniously; but when adversity, with its chilly blast, sweeps away the flowers of prosperity, and naught but the leafless stock, the recollection of the past, remains, then we look around for our friends. Alas! they are gone—yes, gone when we most needed them.

But, to obtain true friends, we have a part to act; we must show ourselves friendly to our acquaintances and friends, and those with whom we associate. Most of us are strangers, from different parts of the country, in a city of strangers; and the majority of us are of the unfortunate class. Bright was our childhood's future, for then prosperity and happiness encircled our families, but misfortune overtakes us, our worldly prospects are blighted; then

we feel that exertion is to be made on our part, and thither we resort to this.

Many of us have had our family circles broken by the impartial hand of death. We have seen a kind father, an indulgent mother, or both, consigned to the silent grave. Many of us have received the unwelcome tidings of the death of parents and friends. Unwelcome to us indeed. It is while perusing the pages of the fatal letter which bore the message, that our hearts are ready to burst with grief. Painful thought! that we had not the privilege of standing by their couch of pain, and administering to their varied wants, or of hearing their farewell advice, nor of seeing the last flicker of the lamp of life as it was gently extinguished by the hand of death. Then how alleviating to the afflicted soul it is, to have a friend that will sympathize with us in our deep affliction, and with kind and consoling words pour in the oil and wine into the bruised heart. Again, if anything transpires, to add happiness to the contented mind, how brightly that spark will kindle when shared with a true and faithful friend.

"Our joys, when extended, will always increase,
Our griefs when divided, are hushed into peace."

Under considerations like these ought we not to show ourselves friendly to all? If we meet with a stranger, treat that stranger kindly, for we know not what secret sorrow is his. We little know what painful emotions are throbbing in his bosom. A mild word, or friendly look, or some little act of kindness, may be the means of alleviating much heart-felt sorrow.

USEFULNESS.—It must be a great satisfaction, at the close of life, to be able to look back on the years which are passed, and to feel that you have lived, not for yourselves alone, but that you have been useful to others. You may be assured, also, that the same feeling is a source of comfort and happiness at any period of life. There is nothing in this world so good as usefulness. It binds your fellow-creatures to you, and you to them; it tends to the improvement of your own character, and it gives you zeal or importance in society—much beyond what any artificial station can bestow.



Oliver Cromwell.—From a picture by Walker, in the British Museum.

OLIVER CROMWELL.



On the 3d September, 1658, died one of the most remarkable men any country has produced—Cromwell, whose character seems to baffle almost in the proportion in which it stimulates our investigation. He was born on the 25th April, 1599, at Huntingdon, England, of highly respectable parents, and by his mother's side, it is said, he was remotely connected with the monarch over whose destinies he was to exercise so great an influence. He was considered an "obstinate" boy, and both at school and college submitted unwillingly to educational discipline. In 1616, he became a member of Sidney college, Cambridge, whence he was removed, at the death of his father, shortly after, and entered at Lincoln's Inn for the

study of the law. He now gave way to the dissipations which surrounded him, and among his other evil propensities at that time was gambling. This life lasted two or three years; at the end of that period, finding he had diminished his fortune, alienated his friends, and, above all, disgusted himself, he made a sudden and lasting reformation. He now married. The object of his choice was Elizabeth Bourchier, daughter of Sir James Bourchier, to whom he was united on the 22d August, 1620, and the match appears to have been a happy one. His attachment to the puritans now began to show itself: some of the most unfortunate appear to have found an asylum in his house. A strong proof of the reality of his religious conviction, as well as of his high moral principle, as seen in the circumstance of his returning several sums of money, in one instance as much as 120*l.*, which he had formerly won by gambling, to the losers.

In 1628 his political career began in his return for the borough of Huntingdon, at the period when Charles I., by his arbitrary and tyrannical conduct, was raising up the storm which finally overwhelmed him. In 1635 Cromwell had a farm at St. Ives; but, either from the failure of the speculation, or from the extent of his hospitality, he now suffered from pecuniary embarrassments. He was relieved at the death of his uncle, Sir Thomas Stuart, by a bequest of property to the value of 500*l.* a year in the isle of Ely. A remarkable incident now occurred. Disgusted with the aspect of affairs, religious and political, in this country, and hopeless of any speedy change for the better, he resolved to go to America. He and Hampden, afterward one of the greatest of his coadjutors, were, it is said, actually embarked, when the vessel was detained, with seven others, bound also to America, by an order of council. This little circumstance seems to stamp the depth of Cromwell's piety. The example and society of the "pilgrim fathers" could have little to attract so thorough a hypocrite as Cromwell's enemies have represented him to have been. He now became an active local man of business, and gradually gathered round him a large body of friends and adherents, while with the people generally he became very popular. He first distinguished himself in personal opposition to his sovereign in the matter of draining the fens of the Bedford Level. The earl of Bedford and other gentlemen "adventurers" had obtained a power to drain that immense district, reserving to themselves 95,000 acres as their reward for the accomplishment of the task. When the work was nearly completed, advantage was taken by Charles of some complaints against the "adventurers," by persons who thought themselves aggrieved, to direct his own officers to examine the drainage, with the intention of depriving the rightful owners of their property, if he could but manage to fix some blame upon them. That the nefarious character of the proceeding might not be mistaken, the king, in his instructions, prejudged the case, and the officers reported as he desired. Cromwell was roused at this proceeding, and acted with such vigor and address in the matter, that

the whole county was filled with indignation at the king's conduct. The popular title of lord of the Fens was long applied to Cromwell, and, as a mark of public approbation, he was elected member for Cambridge at the next parliament, in 1640.

A royalist contemporary, Sir Philip Warwick, thus describes his appearance in the house at this period: "I came one morning into the house well clad, and perceived a gentleman speaking, whom I knew not, very ordinarily apparelled; for it was a plain cloth suit, which seemed to have been made by an ill country tailor; his linen was plain and not very clean; and I remember a spot or two of blood upon his little band, which was not much larger than his collar; his hat was without a hat-band; his stature was of a good size; his sword stuck close to his side; his countenance swollen and reddish; his voice sharp and untunable; and his eloquence full of fervor." His mind seems by this time to have undergone a marked change. The applause he had received in the affair of the Fens, the consciousness (perhaps for the first time) of the powers therein apparent, and lastly, the stimulating nature of the events then going on all around him, doubtless quickened the hitherto dormant ambition, and impelled it to seek a wider scope for its exercise. "Henceforth was he a compound of such virtues and vices, of qualities so various and so opposed, that a mind and powers exactly similar to his own were alone perhaps capable of literally developing his career. Religious to the last in his private and domestic conduct, he accustomed himself to the practice of a greater or less degree of dissimulation throughout his public life. Enthusiastic to a high degree in the cause he had espoused, he yet calculated consequences one by one as they occurred with almost unflinching exactness. So simple were his language and manners, that he appears incapable of disguising a purpose that had arisen in his mind; yet by penetration and address the most exquisite did he, at the same time, so read the hearts and so accommodate himself to the humors of all with whom he associated, as at once to make them his firm friends, and footstools to his future elevation over them. His existence became a perpetual

harlequinade; his expressions shifting from the spiritual to the coarsely jocular; his conduct from the pliant to the overbearing—from the submissive to the most vehement contradictions and the boldest opposition. He could enter with an equal zest into the occupations of preaching, fighting, and reigning; was equally at home in the prayer-meeting, the camp, and the palace. Meanwhile, in every change of time and circumstance, religion, far from contracting, enlarged her hold upon his feelings, but gradually deserting his judgment, the success that attended all his undertakings taught his enthusiasm so greatly to extend it in idea, that finally his every action appeared to him directed by a heavenly guidance, and his very crimes the offspring of a decreed necessity, or instruments to execute upon earth God's righteous vengeance."

In 1641, the parliament remonstrated boldly with the king on his unconstitutional and oppressive acts, and Cromwell, with Pym, Hampden, and other democratic leaders, warmly supported it. When it became apparent to all parties that the sword alone could decide the differences between the king and the people, Cromwell raised a troop of horse in his own county, and, on the actual breaking out of the civil war, acted with such vigor and address as to repress all royalist movements in the neighboring counties, and keep them from the first devoted to the parliament. Not the least extraordinary trait in Cromwell's character was his military genius. Without experience, or having had anything like a military education, commencing the study at a period of life when most other commanders have achieved their reputation, and although frequently placed in the most desperate situations, *he was never beaten*. At Marston Moor, Stamford, and Newbury, he successively overthrew the king's forces, and at last obtained so signal a reputation, that the parliament excepted him from its "self-denying ordinance," passed to prevent members of the house of commons from holding any command in the army. At the battle of Naseby, in 1645, Cromwell commanded the right wing, and was the chief agent in the obtaining that signal victory. Thanks were voted to him in

the following year, and a pension settled upon him to the amount of 2,500*l.* a year.

The great events which followed in rapid sequence are well known. The king in despair threw himself upon the Scottish army, which had entered England in pursuance of the "solemn league and covenant" made between the parliaments of the two countries. By the Scots he was delivered up to the parliamentary commissioners. Cromwell and his party, the independents, were now in great danger from the presbyterians, who commanded a majority in the house of commons, and who, flushed with the consciousness of their strength, endeavored, with that intolerance of spirit which was their great distinguishing characteristic as opposed to the independents, to crush all other sects, and in particular to disband that very army to which they owed all their successes, in order to form a new one more in accordance with their own tenets. The soldiery resisted, and thus was begun the struggle which in a measure compelled Cromwell to take many of those arbitrary steps for which his ambition has had the discredit. One Cornet Joyce, at the head of a party of horse, obtained possession for the army of the person of the king, and Cromwell that very day left London to avoid being seized by the presbyterians and sent to the Tower. He was received with shouts by the soldiery, and a solemn engagement was entered into not to disband or divide without redress of grievances, security against oppression to the whole freeborn people of England, and the dismissal of the presbyterians from the government. Negotiations were now commenced by all parties with the king, while at the same time the army marched toward London, meeting in their way a large minority of the parliament, consisting of course of independents, while many of the presbyterians fled on its approach. There seems no cause to doubt the sincerity of Cromwell in his endeavors to replace Charles on the throne, though on a more equitable foundation; while the bad faith of the king is certain, and ultimately caused the treaty to be brought to a sudden conclusion. Charles now made his escape, but was again detained in the isle of Wight. The republicans of

the army, who formed by far the most numerous part of it, seem to have been dissatisfied with Cromwell for not proceeding faster and more boldly in that course, which, when he did pursue it, brought down every kind of opprobrium on his name. They now gave him plainly to understand that he must join them or be sacrificed. He did join them, though not till he had completely put down the more violent and ultra of the party, and from that time all thought of the restoration of the king appears to have been given up. The presbyterian majority was made a minority by the very simple though not very constitutional application of Colonel "Pride's purge," that officer being stationed at the door of the house of commons to arrest a great number of the principal presbyterians as they entered. It was the remainder of this parliament that determined upon the trial of the king, and caused their determination to be carried into effect, which resulted in his execution before Whitehall. During the sittings which took place in Westminster hall, Cromwell attended regularly every day. When the sentence was known, many applications were made to him to interfere and stay the execution. To Colonel Cromwell, his cousin, who thus applied, he said, "Go to rest, and expect no answer to carry to the prince, for the council of affairs have been seeking God, as I also have done, and it is resolved by them all that the king must die."

Cromwell was now employed in Ireland, which had rebelled, and he reduced it to submission in an almost incredibly short space of time, but not without the committal of cruelties upon the unhappy natives, a crime from which he was remarkable free in all his other campaigns. The next very important incident was the battle of Dunbar, in 1650, where he defeated the Scots, who had taken up the cause of Charles II., and were about to invade England. In this engagement Cromwell's military genius shone out most brilliantly. He defeated an army of 27,000 men with only 12,000, and that too under the greatest disadvantages of position. This battle furnishes two instances of his religious enthusiasm amounting almost to sublimity. The Scots were on

the hills, Cromwell on the plain at their feet: the latter, seeing no hope of drawing them from their position, sent round, during the night preceding the battle, a detachment to the enemy's rear, to attack them in a weak part. While this manoeuvre was in progress of execution, Cromwell beheld, at daybreak, most unexpectedly, the Scots descending to attack him. He at once cried out, "God is delivering them into our hands! They are coming down upon us!" Again, in the thick of the fight, he beheld the sun just beginning to appear, and immediately his voice was heard grandly pealing out, while his arm was seen directed toward the glorious luminary, "Now let our God arise, and his enemies shall be scattered!" Charles II. having in the interim marched into England, Cromwell hastily followed, overtook, and totally defeated him at Worcester. He now received additional honors and pensions. On the 20th April, 1653, the struggle between the independents and the presbyterians was again summarily decided in favor of the former, for the time, by the famous dissolution of the long parliament. This parliament first met on the 3d November, 1640, in the reign of Charles I., and was the longest, with one exception, of any on record. After Cromwell had entered the house, he addressed himself to St. John the chief justice, telling him that "he was come to do that which grieved him to the very soul, and that he had earnestly, with tears, prayed to God against it, nay, that he had rather be torn in pieces than do it, but that there was a necessity laid upon him therein, in honor to the glory of God and the good of the nation." This was spoken so as not to be generally heard. Immediately after he called to Major-General Harrison, who was on the other side of the house, to come to him, and to him he declared that "he judged the parliament ripe for a dissolution, and this to be the time of doing it." Harrison requested him to consider seriously before attempting a thing so great and dangerous. "You say well," he replied, and sat still for about a quarter of an hour longer, till the debate having closed, the question was about to be put. He then said again to Harrison, "This is the time I must do it," and aud-



Cromwell Dissolving the Long Parliament.

denly starting up, first addressed some violent reproaches to the speaker, alleging that the parliament had cheated the country, and displayed only the grossest venality; and then, stamping with his foot, he, in a furious manner, desired the speaker to leave the chair, and called out to the house, according to Bate, "For shame! get you gone! give place to honest men, and those that will more faithfully discharge their trust." Ludlow says he told them that the Lord had done with them, and had chosen other instruments for the carrying on his work that were more worthy.

Although several of the members rose, one only had the boldness to speak, in spite of his commands that they should remain silent. This member, who has been thought to be Sir Peter Wentworth, inveighed in bitter terms against the atrocity of the proceeding. He had not, however, uttered more than a sentence or two, when Cromwell, stepping into the middle of the house, cut him short, by exclaiming "Come! come! quick, put an end to your sitting; call them in! call them in!" Two files of musketeers now marched into the house. On this, Sir Harry Vane called out from his place, "This is not honest; yea, it is against morality and common honesty."—"Off! Sir Harry Vane! Sir Harry Vane!" answered Cromwell, "the Lord deliver me from Sir Harry Vane!" He followed these words by a string of invectives addressed to other individual members. The whole was now a scene of confusion and uproar. This is the moment which West has chosen. The speaker is still in his chair, in vain endeavoring to calm the disorder. The clerks also retain their places at the table; but in front of that stands the dictator, pointing with emphatic contempt to the mace, the venerated symbol of the dignity of the assembly, and calling to one of the soldiers, who is obeying his orders, "Take away that fool's bauble." Of the rest of the troops, some are at his back, and others are seen with their raised halberds mixed with the members in every part of the house, and endeavoring to prevent the attempts of several of them to speak. The person on the left in our engraving, who is seen stretching forth

his hands in an attitude of such vehement enthusiasm, and who has evidently arrested Cromwell's eye as he is issuing his command for the removal of the mace, may be supposed to be Wentworth or Vane, protesting against that last excess of indignity and outrage. The speaker, having declined to leave his chair until he was forced, was handed down from it by Harrison. All the other members then retired, Cromwell remaining till the last had left the house. He then ordered the doors to be locked, and walked away.

A new parliament was summoned, in the persons of 139 members, to whom Cromwell's writs were directly addressed, and who were upon the whole men of good family or of military distinction, though mixed with some inferior personages; among them one whose name was given to the parliament in derision, Barebone. On the 16th December, 1653, he assumed the title of lord high protector of England, Scotland, and Ireland. It is well known that he wished to have been king, but a considerable portion of his most faithful adherents in the army were opposed to that desire; accordingly, when he was formally invited to assume the crown, he declined. Like his unhappy predecessor, Cromwell dissolved parliament after parliament, but certainly not, like him, with the evident intention of creating a despotic authority.

From the time that Cromwell's influence directed the foreign relations of the country, it is astonishing to see the respect and fear the very name of England inspired. The Dutch, with their famous admiral Van Tromp, were signally defeated, and stripped of their pretensions to the sovereignty of the seas; Jamaica, was annexed to its dominions; the Spaniards were compelled to sue for peace after some severe defeats in the low countries; and everywhere English alliance and English friendship were courted, and not unfrequently in the most servile manner. The last days of Cromwell appear to have been much embittered by the dread of assassination, which the chivalric royalists, as they delighted to consider themselves, did not hesitate openly to recommend. He wore armor under his dress; never stirred without his guards; he became morose and

melancholy. The death of his favorite daughter, Lady Claypole, whom he loved with the deepest and tenderest affection, gave the finishing stroke to his unhappiness. It is by no means an improbable supposition that the days of the stern ambitious protector of England were shortened by that romantic and not uncommonly disbelieved malady, a broken heart. He died on the anniversary of his two battles of Dunbar and Worcester, in the sixtieth year of his age. He was buried with the greatest pomp and magnificence; but the miserable spite of Charles II. could not allow his remains to rest in peace; they were taken up at the restoration, hung upon the gallows at Tyburn, and then flung into a hole at its foot.

CAUSE OF THE AMERICAN REVOLUTION.



WHEN President Adams was minister at the court of Saint James, he often saw his friend and countryman, Benjamin West, the late president of the royal academy. Mr. West

always retained a strong and unyielding affection for his native land. Mr. West one day asked Mr. Adams if he should like to take a walk with him, and see the cause of the American revolution. The minister having known something of this matter, smiled at the proposal, but told him that he should be glad to see the cause of that revolution, and to take a walk with his friend West anywhere. The next morning he called according to agreement, and took Mr. Adams into Hyde park, to a spot near the Serpentine river, where he gave him the following narrative: "The king came to the throne surrounded by flattering courtiers, one of whose frequent topics it was, to declaim against the meanness of his palace, which was wholly unworthy of a monarch of such a country as England. They said there was not a

sovereign in Europe who was lodged so poorly—that his sorry, dingy old brick palace of St. James looked like a stable, and that he ought to build a palace suitable to his kingdom. The king was fond of architecture, and would therefore listen to suggestions which were in fact all true. This spot you see bare was selected for the site, between this and this point, which was marked out. The king applied to his ministers on the subject; they inquired what sum would be wanted by his majesty, who said that he would begin with a million. They stated the expenses of the war, and the poverty of the treasury, but his majesty's wishes should be taken into full consideration.

"Sometime afterward the king was informed that the wants of the treasury were too urgent to admit of a supply from their present means, but that a revenue might be raised in America, to supply all the king's wishes. This suggestion was followed up, and the king was in this way first led to consider, and then to consent to the scheme for taxing the colonies."

THE REIN-DEER.



HE rein-deer, an animal of the most important service in the districts of which it is native, is found nowhere but within the polar regions. Several attempts have been made to introduce it into more temperate climates, but they all failed.

From the earliest times the rein-deer appears to have been domesticated by the Laplanders; and that dreary region owes to this animal whatever it possesses of civilization, and whatever comforts tend to render it supportable to the inhabitants.

The Laplanders are divided into two very distinct classes; one who are settled in their habits, living on or near the coast, and supporting themselves by fishing; the other inhabiting the mountains, and wandering through the summer and winter with no shelter but their tents, and no

provision but their rein-deer. These valuable animals, however, are subject to a visitation in the summer which compels their owners to repair to the coast, frequently an arduous journey, in order to mitigate their sufferings and preserve their lives.

It is well known, from the account of those travellers who have visited Lapland during the summer months, that the interior parts of it, particularly its boundless forests, are so infested by various species of gnats and other insects, that no animal can escape their incessant persecutions. Large fires are kindled, in the smoke of which the cattle hold their heads, to escape the attack of their enemies; and even the natives themselves are compelled to smear their faces with tar, as the only certain protection against their stings. No creature, however, suffers more than the rein-deer from the larger species (*æstrus tarandi*), as it not only torments it incessantly by its sting, but even deposits its egg in the wound it makes in its hide. The poor animal is thus tormented to such a degree, that the Laplander, if he were to remain in the forests during the months of June, July, and August, would run the risk of losing the greater part of his herd, either by actual sickness, or from the deer fleeing of their own accord to mountainous situations to escape the gad-fly. From these causes the Laplander is driven from the forests to the mountains that overhang the Norway and Lapland coasts, the elevated situations of which, and the cool breezes from the ocean, are unfavorable to the existence of these troublesome insects, which, though found on the coast, are in far less considerable numbers there, and do not quit the valleys; so that the deer, by ascending the highlands, can avoid them.

Early in September the herds and their owners leave the coast, in order to reach their winter quarters before the fall of the snows. With the approach of winter, the coat of the rein-deer begins to thicken, and like that of most other polar quadrupeds to assume a lighter color. It is, however, when the winter is fairly set in that the peculiar value of the rein-deer is felt by the Laplanders. Without him, communication would be almost utterly suspend-

ed. Harnessed to a sledge, the rein-deer will draw about 300 lbs.; but the Laplanders generally limit the burden to 240 lbs. The trot of the rein-deer is about ten miles an hour; and the animal's power of endurance is such, that journeys of one hundred and fifty miles in nineteen hours are not uncommon. There is a portrait of a rein-deer in the palace of Drotningholm (Sweden), which is represented, upon an occasion of emergency, to have drawn an officer with important despatches the incredible distance of eight hundred English miles in forty-eight hours. This event is stated to have happened in 1699, and the tradition adds, that the deer dropped down lifeless upon his arrival.

During the winter, the food of the rein-deer is the lichen or moss, which they display wonderful quickness of smell in discovering beneath the snow. In the summer they pasture upon all green herbage, and browse upon the shrubs which they find in their march. They also, it is now well ascertained, eat with avidity the lemming or mountain rat, affording one of the few instances of a ruminating animal being in the slightest degree carnivorous.

Of course, in a country where their services are so indispensable, rein-deer constitute the principal wealth of the inhabitants. The number of deer belonging to a herd is from three hundred to five hundred; with these a Laplander can do well, and live in tolerable comfort.

Von Buch, a celebrated traveller, has well described the evening milking scene, of which a representation is given in our engraving: "It is a new and a pleasing spectacle, to see in the evening the herd assembled round the gamme (encampment) to be milked. On all the hills around, everything is in an instant full of life and motion. The busy dogs are everywhere barking, and bringing the mass nearer and nearer, and the rein-deer bound and run, stand still, and bound again, in an indescribable variety of movements. We never hear the foot on the earth, and nothing but the incessant crackling of his knee-joints, as if produced by a repetition of electric shocks—a singular noise; and from the number of rein-deer, by whom it is at once produced, it is heard at a great distance. When all the herd, consisting

Milking of the Reindeer.



of three or four hundred, at last reach the gamme, they stand still, or repose themselves, or frisk about in confidence, play with their antlers against each other, or in groups surround a patch of moss browsing."

HONOR AND TRUTH.



HERE is no prouder title to the respect of our fellow-creatures than the being what is known as—"a man of his word." As there is nothing so mean as treachery, so there is nothing more noble than truth. Never break a promise once given. On no occasion stoop to a falsehood. It is sometimes thought a mark of sharp intellect in trade to overreach a customer, but the morality which sanctions such an act is low, knavish, and contemptible. Disimulation is rarely to be excused: the meaner vice of simulation never. If you can not reveal the truth, stoop not to counterfeit a lie. It is alike dishonorable to utter a falsehood or to act one. Many persons affect to think that there can be no lying unless in words, and accordingly take great pains to deceive others by looks, hints, and deeds. But there is something base as well as wrong in such conduct. We would rather a man would lie to us openly, than cheat and beguile us by such contemptible stratagems. The essence of falsehood is deceit, and he who deceives a neighbor, yet avoids putting the lie in words, is quite as criminal and far meaner than the bold, frank, bad man, who openly violates truth, instead of skulking into corners to outrage her in secret.

In the present day, alas! there is too little regard for truth. The good old-fashioned morality of our sires, which regarded falsehood as the most detestable of acts, has come to be looked on as an obsolete affair, very appropriate for the days of our grandfathers, but not at all fitted for their active, enterprising, and quick-witted descendants. "You *did* him

finely," says the dealer to his clerk, when the latter has succeeded in getting off a lot of goods at the highest prices. "A sharp youngster that," says the merchant, in hearing of the lad, who has, in imitation of his elders, just overreached a customer. "That's a keen fellow: nobody will get ahead of him," we hear continually applied to individuals noted for sharp dealing. Is there any wonder that when deception is thus encouraged, the morals of trade should be loose, or a disregard of truth infect even private life? No man can long maintain two characters—one for the counting house and one for the parlor.

"He who will habitually tell falsehoods is not to be trusted," said Sir Walter Scott, and few men understood human nature better, or scorned base actions more. Parents should remember this. The child who learns to lie will not be long in learning to do worse. The youth who disregards truth, though he may grow up to be apparently a man of rectitude and honor, has a character rotten at the core, and will be tempted into many a mean and discreditable action, thinking that a few false words will conceal his guilt. Oh! suffer any error in a child rather than an indifference to truth. Teach him never—either by word, look, or action—to degrade himself to falsehood. Learn him to loathe a lie. Instruct him that every noble nature, that every man of honor scorns and detests untruth, whether in public or private life, as something inexpressible base.

CURIOUS FACTS ABOUT THE SPIDER.



WE have many examples in the anatomy of animals, of a compensation in the structure of one organ for the defects of another. The ponderous weight of the elephant's head rendered it necessary that his neck should be so short, that it is impossible for him,

with it, to reach the ground, and even though he might have fed upon shrubs and trees, yet he would not have been able to drink, had not this inconvenience been remedied by the length and flexible nature of the proboscis. The weakness of the legs and feet in the bat, is compensated by the strength of its hook; and the want of web feet in the crane, which has to seek its food in the water, by a long leg, that enables it to wade, and a long bill, by which it can grope.

A scarcely less wonderful instance of this compensation is to be found in the spider—an insect, which however much we are wont to despise, yet claims our serious attention, as exhibiting in its structure and habits, evident marks of benevolent wisdom. It will, perhaps, be well known to our readers, that flies constitute the principal food of this insect; they may not, however, be acquainted with the remarkable fact, that it is furnished with no wings to pursue its prey. To supply this deficiency, it is provided with an apparatus, by which it is able to weave webs for the entangling of its prey, and to fabricate little cells for its own habitations.

A careful examiner of a spider, will perceive little toots or spinners in its body, in which are numerous small tubes, from each of these is drawn a slender thread, and all of these uniting together, a strong compound thread issues from each spinner. The claws with which the creature arranges these threads, are not less delicate in construction than the threads themselves, and answer several important purposes in the economy of the animal.

One species of spider has an apparatus not unlike a carding machine, by which it forms the adhesive parts of the snare. The texture of the threads varies, according to the purpose they are meant to serve—those designed for the web being much more fragile than those intended to shelter the eggs of the female insect from cold, or from the attacks of its enemies.

The manner in which the garden spider fabricates the web from those threads, is exceedingly curious, and well worthy of notice. Its first act is to form a circular outline, which it effects by fastening its threads on every leaf, for a considerable distance around. This accomplished, it

next draws a cross thread from some convenient point in it, to the opposite side, and taking the middle of this, as a centre, it draws out various lines to the circumference, resembling the spokes of a wheel. With the same centre, it spins several circles, fastening its threads to the spokes, and having thus finished its work and tested its security, it returns to its own retreat, generally a cell in the centre of the web, to wait till a vibration of the strings announces the approach of prey. How wonderful the contrivance by which God has thus enabled this little creature to provide for the supply of its wants! Man would have thought it impossible that an insect thus requiring smaller creatures for its support, and yet possessing no means of following them in their flight, could have continued in existence; but the goodness and the wisdom of God have abundantly provided for this emergency.

It surely then can not become us to despise or wantonly to destroy an animal on which he has bestowed so much of his gracious care. Is it not rather our duty to learn some of those lessons it is so well calculated to teach of the power, wisdom, and benevolence of the great Creator? We may be assured that the more we contemplate him in his works, the more will our admiration be excited, our humility deepened, our gratitude strengthened, and our love inflamed.

GLEANERS OF THE PONTINE MARSHES.



HE whole of the Campagne, or plain of Rome, from the Tiber to the mountains on the frontier of the Neapolitan kingdom, is marshy, and during the summer months most unhealthy; but the southern part of this tract, called, *par excellence*, the "Paludi" (or the marshes) is more particularly distinguished for its insalubrity. From Torre Tré Ponti to Tersaxina, a

distance of twenty-five miles, the land is low and flat, and in some parts, both inland at the foot of the mountains and near the seashore, covered with water. In breadth from the sea-line to the Apennines, the district varies from ten to twelve miles, and on this wide expanse there is scarcely a hillock, scarcely a tree. It is traversed by a noble road, as straight as an arrow; the high-road from Rome to Naples, running in part over the celebrated Via Appia, which was laid down in the time of the Roman republic, about three centuries before the Christian era. In travelling along this road, the eye ranges over a rich expanse of pasture and corn lands, the cultivated part, however, bearing but a small proportion to the pasturage. Not a hedge, not a fence of any kind, occurs for many miles, the limits of the vast farms being merely marked by *termini*, or stones sunk in the ground. Scarcely a human habitation is to be seen, except at very wide intervals a large gloomy *casale*, looking more like a fortress than a peaceful farm-house.

Smiling under a clear blue sky, and lit up by a glorious summer sun, this great flat, though monotonous, is for a while pleasant to look upon. Green and smooth, it is not unlike many parts of Cambridgeshire, or the more open parts of the fens of Lincolnshire; but the same causes—an insufficient drainage, and the vicinity of stagnant waters, which in England produce ague, here, in a hotter climate, generate malaria fevers of the worst description. Hence, beyond a few families whose chief occupation is taking care of herds of buffaloes and wild cattle that range the waste, there is no fixed population in the Pontine marshes. About the end of October, when the great heats of summer, which render the plain unhealthy, have ceased, the poor and laborious peasants of the Apennines come down from their mountains in bands and perform the necessary labors. Some few stay till May, but in general they return as soon as they have finished their ploughing and sowing. At harvest-time, which occurs about the middle of June, they descend again to the low country, and our engraving represents the arrival of a family party with all its baggage and appurtenances. The engra-

ving is from the design of a German artist, Robert, who has given the scene with admirable truth and nature. It is common for a family to move with all its members, from the hoary grandfather to the infant in arms, and to carry all their simple household goods and moveable property with them. The senior of the party acts as "caporale," or head man, arranges the job with the factor or farmer, and receives the wages of his children and grandchildren. When they reach the scene of their operations they unload their car, and sometimes set up a rude sort of tent to shade them at their meals, and protect them from the dews at night. This care, however, is not always taken, and many of them eat and sleep without any shelter, spreading their blankets on the bare ground. They sometimes make temporary huts of bulrushes and canes, which grow to a prodigious height in the more marshy parts of the plains. Where the soil is very damp, we have sometimes seen these huts set upon poles at the height of six or eight feet from the ground. The occupants, who only use them for sleeping, climb up and enter by an aperture, which is rather a hole than a door-way: a structure of this kind looks like a gigantic bee-hive, or an Indian wigwam set upon stilts.

In the daytime, while the men and women are all at work, the children, where there are any, are carried to the field, and set down on the ground near the reapers, for wolves are not unfrequent visitors in these marshes. The peculiar way of swaddling infants, which is common in all the south of the Peninsula, has not escaped our artist's attention. The little creatures are bound and wrapped round and round, until, in their lower extremities, they look like Egyptian mummies. Though this practice, by which the legs are confined and allowed no play, should not seem a very judicious one, the peasants, and the *lazzaroni* of Naples, among whom it is equally prevalent, are, generally speaking, a remarkably fine-legged generation. The spare food and the hard life led by these poor mountaineers, have been described in accounts of the management of the great farms of the Maremma. Although, putting the best face on a bad business, they arrive



Gleaners of the Pontine Marshes.

piping and dancing, it is seldom that they can return in the same merry mood, the malaria fever being pretty sure to seize one half of them more or less violently. As soon as the corn is cut, the reapers make all the haste they can from the pestilential flat, which, by the month of July, becomes so dangerous that few or none will venture to remain in the fields by night. The livid aspect of those few families that are bound to the spot is indeed a shocking proof of its unwholesomeness. We remember few things more pathetic than the reply that one of these walking spectres made to a traveller who was struck with the abundant sources of disease, and the sickly appearance of the people. "How do you manage to live here?" (*Come si vive qui*), said the stranger. (*Signor, si muore*), "Sir, we die." Some of these parties of reapers have many miles to travel before they reach their homes on the healthy mountains. They walk along in troops, the healthy supporting the sickly; for it is only a few of the better sort that can command the luxury of riding in a buffalo-car. These vehicles are of the most primitive or rudest description: one solid piece of wood, roughly hewed, forms axle-tree and axles, and upon this the wheels revolve with a fearful noise of which our word "creaking" conveys no idea: they scream, shriek, and groan. We have often heard them at more than a mile's distance. The beasts that draw them are the most sulky and savage of all domesticated quadrupeds, and are sometimes known to throw down their driver and press him to death. The strength of this species of buffalo, which attains its highest perfection in the low marshy lands of the Roman and Neapolitan states, is, however, prodigious. A pair of them will draw an immense car heavily laden over the roughest roads, and across the bed of a river, if necessary, with the water over their shoulders. On such occasions they keep their snouts erect, and above the water, blowing like hippopotami. In many parts of the country, where there are no bridges to cross the numerous mountain streams, all communication would be interrupted at certain seasons of the year, if it were not for the strength and aquatic habits of these animals.

SEPTEMBER.



HIS, though now the ninth month of the year, was formerly the seventh as its name imports, being derived from the two Latin words *Septem* and *Imber*. The Saxons call it *Gerst-monat*, or barley-month.

This is, in general, a very agreeable month; the distinguishing softness and serenity of autumn, with its deep blue skies, prevailing through great part of it. The days are now very sensibly shortened; and the mornings and evenings are chilly and damp, though the warmth is still considerable in the middle of the day. This variation of temperature is one cause why autumn is an unhealthy time, especially in warmer climates and moist situations. Those, who are obliged to be abroad early or late in this season, should be guarded by warm clothing against the cold fogs.

Toward the end of this month, the chimney or common swallow entirely disappears. There are various opinions concerning the manner in which these birds dispose of themselves during the winter; some imagining that they all fly away to distant southern regions, where insect food is at all times to be met with; others, that they retire to holes and caverns, or even sink to the bottom of ponds and rivers, where they pass the winter months in a torpid, and apparently lifeless state. That many of them migrate to other countries, seems sufficiently proved. The swift, the swallow, and one of our martins, have been seen at Sierra Leone and the island of St. Thomas, in the months of January and February: they have been traced in their course across Spain and Portugal; but some, probably, always stay behind, which are the younger broods, or smaller kinds, that are incapable of so long a flight, and perish. For some time before their departure, they begin to collect in flocks, settling on trees, basking on the roofs of buildings, or gathering round towers and steeples, whence they take short excursions, as if to try their powers of flight.

Not only the swallow tribe, but many

other small birds which feed on insects, disappear on the approach of cold weather, when the insects themselves are no longer to be met with.

Those sweet and mellow-toned songsters, the wood-lark, thrush, and black-bird, now begin their autumnal music: but it is not the full joyous note of spring: frequently the song proceeds from the young birds of the year imitating the parental note, and influenced by the state of the temperature.

Two or three species of lady-birds are found at this time, and this is the principal season for the death's-head moth: "This creature," says Mr. Knapp, "was formerly considered as one of our rarest insects, and doubtful if truly indigenous; but for the last twenty years, from the profuse cultivation of the potato, is become not very uncommon in divers places. The markings on its back represent to fertile imaginations, the head of a perfect skeleton, with the limb-bones crossed beneath."

The most useful fruit this country affords, the apple, successively ripens, according to its different kinds, from July to September or October; but the principal harvest of them is about the close of this month. They are now gathered for cider making, which in some countries is a busy and important employment.

OAK-BARK PEELERS.



ARK is the outward covering of plants and trees, one of its functions being to protect the inner structure from the effect of sudden changes of temperature. On this account, the bark of the pine-trees which are found in the most inclement regions of North America is often from a foot to fifteen inches in thickness. Another of its uses is to convey to the roots those juices which are elaborated in the foliage. In a young plant the bark is covered with a smooth thin skin; but the expansion of

the wood in a few years causes the bark to assume a rough appearance, the continued growth rending it in a perpendicular direction, as may generally be seen in all aged trees. In the birch-tree, owing to the peculiarity of the bark, strips of it are continually peeling off, being no longer adapted for their intended purposes.

Corks are formed from the dead bark of the cork-tree, which is taken off at certain seasons of the year, being separated without difficulty from the portions of more recent growth. The vigor of a tree is said to be improved by being barked once every eight or ten years after it is fifteen years old; some which have regularly submitted to this operation living for 150 years.

A description of oak growing in the United States produces the quercitron bark, which forms so important an article as a yellow dye. The medicinal value of the Peruvian bark has been known about two centuries, but it was not until fifty years after its introduction in Europe that its qualities were duly appreciated. The original *cinchona* of Peru, which is of a pale color, is becoming scarce. When dry it is scarcely odorous, but becomes so when used as an infusion. The two other descriptions are the red bark and the yellow bark. The fruit is less bitter than that of the *cinchona*, but its astringent qualities are greater. The nearer the second approaches the color of an orange the better is its quality: it is comparatively worthless when it assumes a hue between red and yellow. It is bitter to the taste, but its properties are not astringent.

The bark of a tree always contains a greater proportion of the principle of a plant than any other organ. Oak-bark possesses a chymical property which is used in converting hides into leather. The astringent quality which effects this is called *tannin*. Heath, gall-nuts, birch-tree bark, myrtle leaves, leaves of wild laurel, and willow-bark, have been used as substitutes for oak-bark, and even oak sawdust.

Before being used in tanning, the bark is ground into coarse particles, and a layer is put upon each skin in the tan-pit. Without bark or *tannin* the skins would dissolve into glue, but the astringency which it pos-



Peeling the Bark from the Oak.

sesses occasions a process exactly the reverse, and forms the substance called leather.

The engraving accompanying this article represents a party of women engaged in peeling the bark from an oak-tree. This operation is performed in the following manner: a number of women called "bark-ers" are each furnished with light short-handled mallets made of hard wood, about eight or nine inches long, three inches square at the face, and the other end sharpened like a wedge, in order the more easily to make an incision in the bark, which is done all along the side of the tree which happens to be uppermost, in a straight line; and as two barkers generally work together, it is proper that while one is employed in making an incision with the mallet, the other, being furnished with a pointed instrument called the "barking-bill," cuts the bark across the tree in lengths of from two feet six inches to three feet, and then, by forcing a shovel-shaped instrument called a "peeling-iron" between the bark and the wood, easily separates the former, and peels it from the timber in entire pieces. The larger branches are afterward stripped in a similar manner. This business being chiefly done in the early spring season, the vast trunks are left in the situations in which they first fell till the gathering of the crops in autumn permits their removal. During this time they get blanched to almost perfect whiteness, and in the midst of the summer verdure have a very singular but picturesque appearance.

The bark, when peeled, is carefully dried for two or three weeks, and then piled in stacks of about eight feet square by fifteen feet in height, and sold to the tanner.

GENEROSITY.—There is a great distinction to be made between generosity of *manner* and generosity of *heart*. A good man, with the noblest sentiments and feelings, is sometimes disguised by a certain coldness and formality of manner; while a libertine, whose life is spent in the gratification of self, imposes on the multitude, by the bravery and frankness of his air, for a most generous-hearted fellow.

ANIMAL LANGUAGE.



LANGUAGE—as far as the communication of ideas by certain modes of contact, by gesture, or by sounds, can be called by that name—seems to be possessed in

common by all living creatures. The first or simplest form in which this faculty is manifested among animals, is that of contact—a species of intercommunication beautifully illustrated by the habits of such insects as the ant. If you scatter the ruins of an ant's nest in your apartment, you will be furnished with a proof of their language. The ants will take a thousand different paths, each going by itself, to increase the chance of discovery; they will meet and cross each other in all directions, and perhaps will wander long before they can find a spot convenient for their reunion. No sooner does any one discover a little chink in the floor, through which it can pass below, than it returns to its companions, and, by means of certain motions of its antennæ, makes some of them comprehend what route they are to pursue to find it, sometimes even accompanying them to the spot: these, in their turn, become the guides of others, till all know which way to direct their steps. The mode of communication employed by bees, beetles, and other insects, is much of the same nature, being almost entirely confined to contact, and rarely or ever partaking of gesticulation, which may be considered as the next form of language in the ascending scale.

In expressing their wants, feelings, and passions, almost all the higher animals make use of gesticulation. The dog speaks with his eye and ear as significantly as he does by his voice: the wagging of his tail is quite as expressive as the shake of a human hand: and no pantomime could better illustrate conscious error, shame, or disgrace, than his hanging ears, downcast look, and tail depressed, as he slinks away under rebuke. The dog, indeed, is an admirable physiognomist,

whether actively or passively considered. If you can read craving, fear, or anger, in his countenance, so he will kindness or surliness in yours, just as readily as he can interpret the physiognomy of one of his own species. Observe that huge mastiff gnawing a bone on the other side of the street; and see how the Newfoundland that is coming up on this side deports himself. First he stands stock-still: not a muscle of his frame is moved: the mastiff takes no notice of him. Next, he advances a few steps, looks intently, wags his tail once or twice: still not a glance from the mastiff, which is evidently striving not to observe him. On the Newfoundland goes, with an indifferent amble, keeping as closely to this side as he can, and thinks no more of the mastiff. Had the latter, however, lifted his head from the bone, had he exchanged one glance of recognition, had he brushed his tail even once along the pavement, the Newfoundland would have gone gambolling up to him, even though the two might have had a tussle about the bone in the long-run. Here, then, is an example of strict physiognomy or pantomime, quite as well understood between animals as the most ardently-expressed sounds. Again, mark that couple of terriers, bound on a secret rabbiting excursion to yonder hill-side. Two minutes ago, that shaggy native of Skye was dozing on his haunches, as little dreaming of a rabbit-hunt as of a journey to the antipodes. But his little pepper-and-mustard friend awoke him from his revery, and pricking up his ears, gambolled significantly around him. Next he scampered onward for a dozen of yards or so, looked anxiously back, again scampered forward, looked back, whined, and returned. Then he set out, scenting the ground as if he had made some important discovery, stopped suddenly, made a short detour, tracking some imaginary scent as eagerly as if a treasure of venison lay beneath his nose. This at length rouses his friend of Skye, and away they trot as slyly to the hill as any couple of poachers. Now our pepper-and-mustard hero is beating the whine-bushes, while his comrade stands outside the cover, ready to pounce on the first rabbit that makes its appearance. Not a whine, not a yelp is

heard—the whole is conducted by signs as significant and as well understood as the most ingenious system of marine signaling.

Independent of the humble kind of expression which gesticulation implies, many of the higher animals are possessed of vocal language, by which they can give the most intelligible utterance to their feelings of delight, pain, fear, alarm, recognition, affection, and the like. Nor does this language differ in aught but degree from that which we ourselves enjoy. Our organs may be capable of a greater variety of tones and modulations: and yet in some cases this is more than questionable: all that can be said is, that the human organization is capable of more perfect articulation, and this articulation is a thing of art, imitation, and experience, depending upon the higher degree of intelligence with which the Creator has endowed us. The brute creation expresses their feelings and passions by certain sounds, which are intelligible, not only to those of their own species, but in a great degree to all other animals. Man, in his natural state, does little or nothing more. It is civilization—the memory of many experiences, aided by his higher mental qualities—which gives him his spoken language; each new object receiving a name founded on association with previously-known objects, and each conception receiving expression by association with ideas formerly entertained. Nothing of this kind takes place among animals: their limited endowments do not permit of it, as the range of their existence does not require it. Their language may be considered as stationary in a natural state, though capable of some curious modifications under human training, or even under certain peculiar changes of natural condition. It is to this range of animal expression that we would now direct attention.

Take that barn-yard cock, for example, which five minutes ago was crowing defiance from the top of the paling to his rival over the way, and hear him now crowing a very different note of delight and affection to his assembled dames. In a few minutes you may hear his peculiar "cluck, cluck," over some tid-bit he has

discovered to which he wishes to direct their attention; his long-suppressed guttural cry of alarm, if the mastiff happens to be prowling in the neighborhood; or his soft blurr of courtship, when wooing the affections of some particular female. All of these notes, even to the minutest modulation, are known to the tenants of the barn-yard, which invariably interpret them in the sense they were intended. Or take the barn-yard hen, and observe the language by which she communicates with her young. By one note she collects and entices them under her wing, by another calls them to partake of some insect or grain she has discovered, by a third warns them of danger, should any bird of prey be sailing above, by a fourth calls them away to another place, or leads them home, should they have strayed to a distance. Nor are these various calls known instinctively, as is generally believed, by the young brood. We have watched the habits of the barn-fowl with the closest scrutiny, and are convinced that a knowledge of the mother's notes is, to the young, a process of acquirement: in the same manner as a human child quickly, but nevertheless by degrees, learns to comprehend tones of affection, doting, chiding, and the like. The knowledge of the lower animals is in almost every instance acquired; a process necessarily more rapid in them than in man, as they much sooner reach the limit of their growth and perfection. Animal language is most perfect and varied among such animals as are gregarious in their habits. Let the most ignorant of natural history attend for a few days to the habits of a flock of birds, a herd of oxen, horses, deer, elephants, or the like, and he will find that they make use of a variety of sounds often totally different from each other. Friendly recognition, hatred, fear, mirth, satisfaction, the discovery of food, hunger, and so on, are expressed each by a peculiar note, which is distinctly and instantly comprehended by the whole flock. And as among men, when simple sounds are insufficient, so among animals gesticulation is made use of to assist the comprehension and deepen the impression.

If then, animals are really in possession of a vocal language, it may be asked, is

that language capable of any modification, improvement, or deterioration; and have we any evidence to that effect? That animal language admits of extensive modification, we have ample proof in the history of cage and singing-birds. The natural note of the canary is clear, loud, and rather harsh; by careful training, and breeding from approved specimens, that note can be rendered clear, full, and mellow, as that of the finest instrument. We have further proof of such modification, in the fact of a young canary being made to imitate the notes of the linnet or the goldfinch, just as either of these may be taught the song of the canary. The starling and blackbird may be trained to forsake their wood-notes wild, and to imitate the human whistle to perfection in many of our national melodies. Nay, the parrot, starling, raven, and even the canary, may be taught to articulate certain words and phrases with more precision and emphasis than the tyroes of the elocutionist. Nor is artificial training always necessary to accomplish such modification; for we have the gay and lively mocking bird producing, of his own free-will, almost every modulation, from the clear mellow tones of the wood-thrush, to the savage scream of the bald eagle. While thus exerting himself, a person destitute of sight would suppose that the whole feathered tribe had assembled together on a trial of skill, each striving to produce his utmost effect, so perfect are his imitations. He many times deceives the sportsman, and sends him in search of birds that perhaps are not within miles of him, but whose notes he exactly imitates; even birds themselves are frequently imposed on by this admirable mimic, and are decoyed by the fancied call of their mates, or drive with precipitation into the depth of thickets at the scream of what they suppose to be the sparrow-hawk. The mocking bird loses little of the power and energy of his song by confinement. In his domesticated state, when he commences his career of song, it is impossible to stand by uninterested. He whistles for the dog—Cæsar starts up, wags his tail, and runs to meet his master; he squeaks out like a chicken—and the hen hurries about with hanging wings and bristling feathers, chucking to

protect her injured brood. The barking of the dog, the mewing of the cat, the creaking of a passing wheelbarrow, follow with great truth and rapidity. He repeats the tune taught him by his master, though of considerable length, fully and faithfully. He runs over the quivering of the canary, and the clear whistlings of the Virginian nightingale or redbird, with such superior execution and effect, that the mortified songsters feel their own inferiority, and become altogether silent, while he seems to triumph in their defeat by redoubling his exertions.

As there is thus an evident capability of modification, so there must, to a certain degree, be improvement or deterioration, as surrounding circumstances are favorable or unfavorable to the development of the vocal power. A young canary brought up in the same room with a goldfinch and linnet, if he does not slavishly adopt the notes of either, will often be found to add them to his own natural music. The natural voice of the dog, so far as that can be ascertained from wild species of the family, is more a yelp and snarl than a bark; and yet what is more full and sonorous than the voice of the Newfoundland or mastiff? The wild horse—depending so much as it does upon the society of its kind—acquires the nicest modulations of neighing, so as to express pleasure, fear, recognition, the discovery of pasture, and so forth; while the labored hack has scarcely, if at all the command of its vocal organs. The voice of animals is just as evidently strengthened and increased in variety of tone by practice, as is that of the human singer and orator, and thus becomes capable of expressing a wider range of ideas. Indeed it is certain that, if animals are placed in situations where the use of their language is not required, they will in a short time lose the faculty of speech altogether. Thus, on the coral island of Juan de Neva, where the dogs have been left from time to time, and where, finding abundance of food, they have multiplied prodigiously, it is asserted that the breed have entirely lost the faculty of barking. We knew an instance of a young canary, just bursting into song, which was rendered permanently dumb by being shut up in a darkened chamber, and by occasionally

having a cloth thrown over its cage, that its notes might not disturb an invalid. This treatment was continued for several months; and so effectually did it destroy the clear, brilliant notes of the youngster, that he was never afterward known to utter a note beyond a simple "tweet, tweet" of alarm. As the human speech is affected by disease and old age, so likewise is that of the lower animals. The husky, paralytic voice of the old shepherd-dog, is a very different thing from the full-toned bark of his athletic years; formerly, its modulations could give expressions to joy, fear, anger, reproach, and the like; now, its monotony is destitute of all meaning. We were once in possession of a starling, which we had taught to utter a number of phrases, and to whistle in perfection a couple of Scottish melodies. After a severe moulting attack, not only was his power of voice destroyed, but his memory apparently so much affected, that phrases and melodies were ever after jumbled incoherently together; much like the chattering of an old man in his dotage, or like those individuals who, after severe fevers, forget some of the languages they have acquired, or make themselves intelligible through a new jargon of English, French, and Latin phrases.

But it may be asked—if the lower animals thus make use of a vocal language, are those to whom it is addressed at all times capable of interpreting its meaning? The well-known habits of gregarious animals, in our opinion, ought to answer this question. Every individual, in a herd of wild horses or deer, most perfectly understands every gesture and sound of the watch or leader, which is stationed for the general safety. Nor is such understanding altogether instinctive, but a process of training and tuition quite analogous to what takes place in our own case. Further, the speech, if we may so call it, of one animal is not only understood by the animals of its class, but in a great measure by the other animals that are in the habit of frequenting the same localities. Thus the chaffinch, which discovers the sparrow-hawk sailing above, instantly utters a note of alarm—a note known not only to the other chaffinches, but understood and acted upon by all others of the feathered

pace within hearing. The suspension of every song, the rustling into the thicket beneath, the sly cowering into the first recess, or the clamor of impotent rage, abundantly attests how well they have interpreted the original note of alarm. But if all other evidence were wanting of the capacity of the lower animals to interpret other voices than their own, the fact that many of them learn to interpret human words, and to distinguish human voices, would be sufficient attestation. Thus the young horse taken from the hills, learns in a few months to discriminate the words spoken to him by his driver; and so do the ox, the dog, and other domesticated animals. This comprehension of vocal sounds evidently implies a sense of language—a sense that, on their part also, the expression of certain sounds will meet with a certain interpretation.

Such is the language of the lower animals: limited, no doubt, when compared with that of the human race; yet all-sufficient for their wants, and only inferior because not combined with that higher intelligence which, after all, forms the true distinction between man and his fellows of the animal creation.

THE HALLS OF THE MONTEZUMAS.



MONTEZUMA II., ascended the Mexican throne A. D. 1502, at the age of twenty-three, before Mexico had been discovered by Europeans. He died 30th June, 1520, in the forty-second year of his age, of wounds inflicted by the Spanish discoverers whom he had invited to his royal palace. Historians agree in admiring his character.

On ascending the throne, not content with the spacious residence of his father, he erected another, much more magnificent, fronting on the *place mayor* of the present city of Mexico. So vast was

this great structure, that, as one of the historians informs us, the space covered by its terraced roof might have afforded ample room for thirty knights to run their courses in a regular tourney. His father's palace, although not so high, was so extensive that the visitors were too much fatigued in wandering through the apartments, ever to see the whole of it. The palaces were built of red stone, ornamented with marble, the arms of Montezuma's family (an eagle bearing a tiger in his talons) being sculptured over the main entrance. Crystal fountains, fed by great reservoirs on the neighboring hills, played in the vast halls and gardens, and supplied water to hundreds of marble baths in the interior of the palaces. Crowds of nobles and tributary chieftains were continually sauntering through the halls, or loitering away their hours in attendance on the court. Rich carvings in wood adorned the ceilings, beautiful mats of palm leaf covered the floors. The walls were hung with cotton richly stained, the skins of wild animals, or gorgeous draperies of feather-work wrought in imitation of birds, insects, and flowers, in glowing radiance of colors. Clouds of incense from golden censers diffused intoxicating odors through splendid apartments occupied by the *nine hundred and eighty* wives and five thousand slaves of Montezuma.

He encouraged science and learning, and public schools were established throughout the greater part of his empire. The city of Mexico in his day, numbered twice as many inhabitants as at present, and one thousand men were daily employed in watering and sweeping its streets, keeping them so clean that a man could traverse the city with little danger of soiling his feet and his hands. A careful police guarded the city. Extensive arsenals, granaries, warehouses, an aviary for the most beautiful birds, menageries, houses for reptiles and serpents, a collection of human monsters, fish-ponds, built of marble, and museums and public libraries, all on the most extensive scale, added their attractions to the great city of the Aztecs. Gorgeous temples—in which human victims were sacrificed, and their blood baked in bread, or their bodies dressed for food to be devoured by the people at religious

festivals—reared their pyramidal altars far above the highest edifices. Thousands of their brother men were thus sacrificed annually. The temple of Maxtli, their war-god, was so constructed that its great alarm-gong, sounding to battle, roused the valley for three leagues around, and called three hundred thousand armed Aztecs to the aid and service of their monarch. So vast was the collection of birds of prey, in a building devoted to them, that 500 turkeys, the cheapest meat in Mexico, were allowed for their daily consumption. Such were the "halls of the Montezumas!" The summer residence of the monarch, on the hill of Chapultepec, overlooking the city, was surrounded by gardens of several miles in extent, and here were preserved until the middle of the last century, two statues of the emperor and his father. The great cypress-trees, under which the Aztec sovereign and his associates once held their moonlight revels, still shade the royal gardens. Some of them, fifty feet in circumference, are several thousand years old, but are yet as green as in the days of Montezuma, whose ashes, or those of his ancestors, render sacred, in the eye of the native Mexicans, the hill of Chapultepec. Natural decay and a waning population now mark the seat of power of the great Montezumas.

THE PARKS OF ENGLAND.

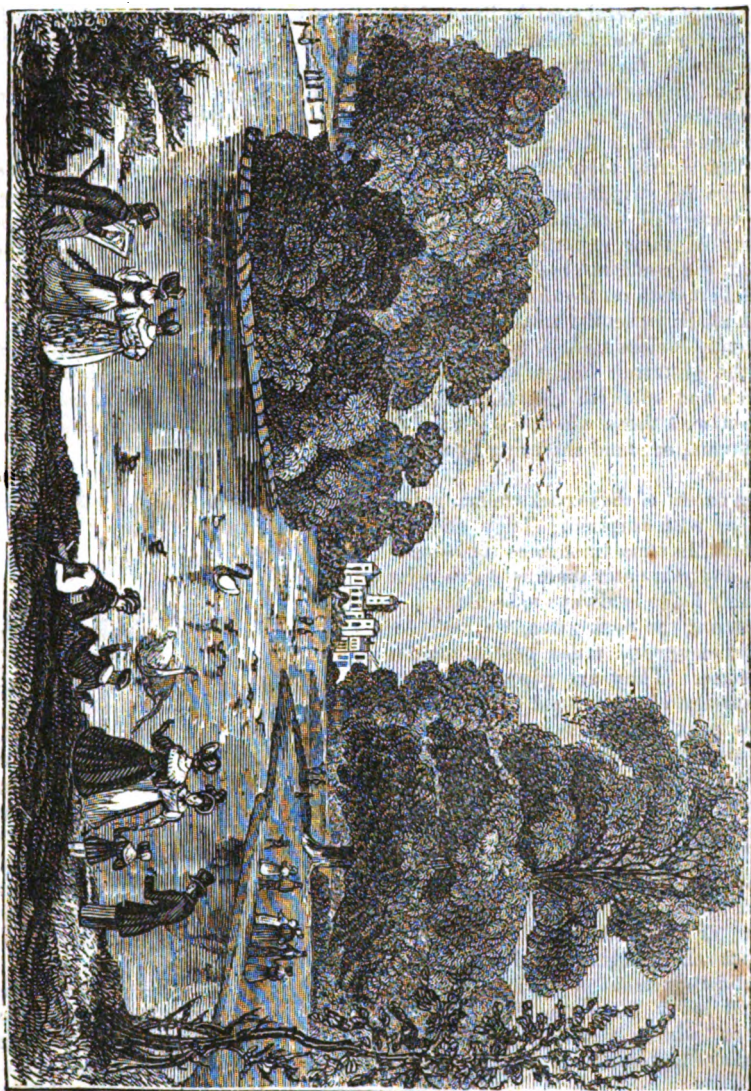


THE parks abound with trees of extraordinary age and size. They are not like the trees of our original forests, growing up to a great height, and on account of the crowded state of the neighborhood throwing out but few lateral branches; what they want in height they gain in breadth, and if we may be excused for a hard word, in umbrageousness. We measured one in Lord Bogot's celebrated park in Staffordshire, and going round the outside of the branches, keep-

ing within droopings of the circuit, was a hundred yards. The circumference of some of the celebrated oaks in the park of the duke of Portland which we measured together, which he did us the kindness to accompany us through his grounds, seemed worthy of record. The little porter oak measured 27 feet in circumference, the great porter oak 29 feet in circumference, the seven sisters 33 feet in circumference. The great porter oak was of a very large diameter 50 feet above the ground, and an opening in the trunk of green dale oak was at one time large enough for the passage of a small carriage through it; by advancing years the open space has become contracted. These, indeed, are noble trees, though it must be confessed that they were thrown quite into the shade of the magnificent Kentucky buttonwood or sycamore, of whose trunk we saw a complete section at Derby, measuring 25 feet in diameter, and 75 feet in circumference. This was brought from the United States, and indeed well might be denominated the mainmoth of the forest.

In these ancient parks, oaks and beeches are the predominant trees, with occasional chestnuts and ashes. In very many cases we saw the beauty and force of that first line in the pastoral of Virgil, where he addressed Tityrus as "playing his lute under the spreading shade of the beech-trees." These trees are looked upon with great veneration; in many cases they are numbered; in some a label is affixed to them, giving their age; sometimes a stone monument is erected, saying when or by whom this forest or this clump was planted; and commonly some family record is kept of them as a part of the family history. We respect this trait in the character of the English, and we sympathize with them in the veneration for old trees. They are the growth often of centuries, and the monument of years gone by.

We can not enter into the enthusiasm of an excellent friend, who used to say that the cutting down of an old tree ought to be made a capital offence at law; and we would always advise that an old tree, standing in a conspicuous station either for use or ornament should be at least once more wintered and summered before



St. James' Park, London

the sentence of death, which may be passed upon it, is carried into execution.

The trees in the park of the palace of Hampton court are many of them, the horse chestnut and the lime, of great eminent beauty ; several straight lines of them forming, for a short clear bright day, at the season of their flowering, we passed through this magnificent avenue with inexpressible delight. We passed through them again late in the autumn, when the frost had marred their beauty, and autumnal gales had stripped off their leaves ; but they were still venerable in the simple majesty of their gigantic and spreading arms. We could not help reflecting with grateful emotion on that beneficent power, which shall presently breathe upon these apparently lifeless statues, and clothe them with the glittering foliage of spring, and the rich and splendid glories of summer. So be it with those who have got far into the autumn, or stand shivering in the winter of life.

The extent of these parks in many cases filled me with surprise. They embraced hundreds, in some instances thousands of acres, and you enter them by gates, where a porter's lodge is always to be found. After entering the park gates, we have rode sometimes several miles before reaching the house. They are generally devoted to pasturage of sheep, and cattle, or deer. In the park at Chatsworth, the herd of deer are kept at no inconsiderable expense, requiring abundant pasturage in summer, and hay and grain in winter. An English pasture is seldom or never ploughed. Many of them have been in grass beyond the memory of any one living. The turf becomes close and hard ; and the feeding of sheep and cattle undoubtedly enriches the land especially under the careful management of one eminent farmer—and many more doubtless, are like him—on whose pasturage grounds the manures of the cattle are daily and evenly spread.

In speaking of the parks in the country, we ought not to pass in silence the magnificent parks of London, as truly magnificent they must be called, including St. James' park, Green park, Kensington gardens, Hyde park, and Regent's park.

Kensington gardens, exclusive of private

gardens, within its enclosure contains 227 acres, Hyde park, 380 acres, Green park, connected with St. James' park, 87 acres ; terraces connected with Regent's park, 80 acres—making a grand total of 1,202 acres. To these should be added the large, elegant, and highly embellished public squares in various parts of London, and even in the most crowded parts of the old city, which in all probability, exceed 1,000 acres.

These magnificent parks, it must be remembered, are in the midst of a populous town, including upward of 2,000,000 of inhabitants, are now open to the public for exercise, health, and amusement. They are at the same time, to a degree, stocked with sheep and cows.

It is impossible to over-estimate the value to health of these open spaces, and the amount of recreation and rational enjoyment they afford to this vast population.

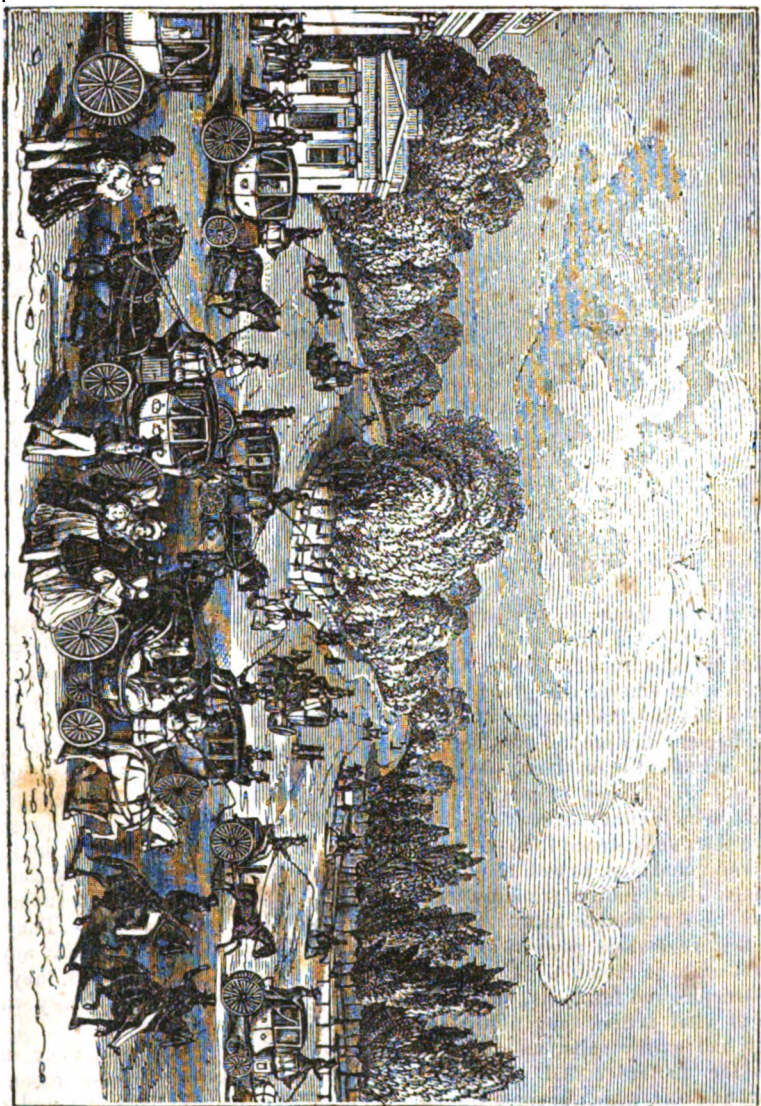
Windsor great park contains 3,500 acres, and the little park 300 acres.

THE VEGETABLE KINGDOM.



It is now midsummer—the bright sun shines throughout the long day, diffusing light and heat over the face of nature—the earth is in its full luxuriance ; and in the words of Milton, “it were an injury and silliness against nature not to go forth and taste her beauties, and mingle in her rejoicings with heaven and earth.”

What a change a few months has brought about ! Lately, the earth was bound up in the severe frosts of winter—not a leaf or a gay blossom was to be seen—all was apparent barrenness and desolation. And so was the earth before it was first clothed with the green herb—a bare, rocky, and barren mass. Vegetables are as it were the clothing of the earth ; flowers, shrubs, and trees, its ornaments. There is a softness and appropriateness in the subdued tinge of green, which is with very few



Hyde Park—Entrance from Piccadilly.

exceptions the prevailing livery of the earth—something which is pleasing and refreshing for the eye to look upon, without being too glaring or dazzling.

Vegetables, though they do not possess the structure and sensations of living animals, have yet a kind of life of which mere matter is altogether destitute. They form a link, and a most important one, between mineral substances, such as rocks and stones, and animated beings. But though they are thus endowed with a kind of vitality, yet, as to actual composition, they are, like all animals, not excepting man himself, literally formed out of the "dust of the earth."

A few simple substances, such as carbon, sulphur, phosphorus, potash, soda, lime, magnesia, combined with three gaseous bodies, oxygen, nitrogen, and hydrogen, make up the whole of the matter of which plants are composed. Now, exactly the same substances combine to form the flesh and bones of animals; but as animals can not extract and combine these substances directly from the air, water, and soil, they have to depend either directly or indirectly on vegetables for their nourishment. No animal, even the simplest or most minute or insignificant, can live on inorganic matter. A great proportion of quadrupeds derive their sole support from grasses and green herbs, and many kinds of birds from grain and seeds; these become the prey of carnivorous animals, and afford them their sole means of subsistence. Fishes prey upon flies and insects, which either directly or indirectly derive their subsistence from the vegetable kingdom; and man, as well as some other animals, lives indiscriminately both on animal and vegetable matter. We thus find that vegetables perform a most important office in creation. By their peculiar structure and functions, and under the laws of vital action, they assimilate air, water, and earthy salts, and form out of them the matters called gluten, starch, sugar, and oils, which become the food of animals.

It is to the operations of vegetables, too, that we owe a considerable proportion of the soil which covers the earth. If we examine the rocks and stones around us, we shall find their surfaces covered

with circular patches of gray and yellowish lichens. These are simple plants, the minute seeds of which, wafted by the winds, fall on the rocks, and adhere to them by means of a glutinous matter on the lower sides of the seed. Attracting moisture from the air, they germinate, increase, and then moulder to decay. Their remains, mingling with the mouldering rocks beneath, in time accumulate a certain depth of soil, which still goes on increasing, till at last it becomes a deep bed fit for receiving and nourishing other species of plants that may be driven toward it by the agency of the winds, of birds, or other means which nature employs for the diffusion of vegetables. In this manner have our deepest and most fertile soils derived their origin. We find also vast accumulations of decayed plants making up peat mosses—and vegetables of a still more remote growth treasured up in the bowels of the earth in the form of that most valuable mineral, coal.

In common language, we speak of plants as living, as growing or increasing, and as fading and dying. Now, this is strictly correct. A plant is an organized structure, having numerous minute cells and porous tubes through which a sap or juice flows, and by which all the functions are performed, tending to increase, preserve, or multiply the species. It is possessed of what has been called irritability, which in many respects resembles some of the motions of animals, as is exemplified in the shrinking of the sensitive plant when touched by the hand, the movements of the leaves of plants toward the light, and the twining of their tendrils round other neighboring substances for support. But plants have not sensation. They do not feel like animals, nor exhibit any traces of consciousness. In short, they possess only that lowest form of vitality which has been called organic life.

Plants vary greatly in their structure, but the generality have roots, stems, branches, leaves, blossoms, and receptacles for the maturation of the seeds. Permeating the roots and stem, there are a series of minute hollow tubes and spiral vessels through which the sap passes upward from the earth, and, mounting to the leaves, there combines with the gases of

the atmosphere, and thus becomes converted into a nutritious juice, which again descends, and is distributed throughout every part of the plant for its growth and nourishment. The outer bark of the plant consists of a thin membrane, somewhat like the skin of animals, and serves a similar purpose, to protect the parts beneath from the air and from external injury; serving also for the exhalation and absorption of moisture through its numerous pores. Immediately under the skin is a soft pulpy structure, consisting of innumerable cells, and which is of a green color in almost all vegetables. Of this kind of structure, too, the leaves of plants are composed. Under this cellular substance, we find in woody plants the true bark or *liber*, composed of numerous fibres running in a longitudinal direction, and having the appearance, when slightly macerated, of a fine net-work. In this portion of the bark the peculiar virtues of plants principally are found; such as gums, resins, essential oils, as cinnamon, peppermint, turpentine, and the astringent tannin of the oak. The wood is found immediately under this, circle within circle, extending to the pith, which is situated in the centre. The outer circle of wood next the bark is softer and juicier than those in the centre, being the newest; and as a circle is formed each year, the number in a transverse section, near the root, will commonly denote the age of the tree, at least all those trees of temperate regions. Throughout the woody fibres, but especially the outer circles, there are numerous tubes and cells, generally six-sided, through which sap and air freely flow. The leaves of plants are most important appendages, and may be compared to the lungs of animals. Plants will not live if deprived of their leaves, or if they have not free access to the sun and air. During the day, and in sunshine, the leaves of plants continually absorb the carbonic acid and nitrogen gases of the atmosphere, which enter into union with their juices, while oxygen gas is as constantly exhaled. In the darkness of night this process ceases, and a portion of the carbonic acid of their juices is thrown off. Now, this daily action of plants is just reverse of the breathing process of animals—the latter

consume the oxygen of the atmosphere, and give out carbonic acid, so that in process of time the air we breathe would become vitiated, were its oxygen not continually renewed by the operations of the vegetable kingdom. Here then we perceive another providential adjustment; not only do plants contribute food for animals, but they are also the great regenerators of the atmosphere, the purity of which is equally subservient to animal existence.

But there remains another feature of plants to be noticed—the flowers or blossoms, those variously tinted portions which add such beauty and splendor to the face of nature. We can not in the summer season turn our eyes in any direction, where we do not find the trees, hedges, and fields, loaded with gorgeous ornaments, from which proceeds also a mingled odor of delightful sweets. Even the meanest weed beneath our feet shows its little white star, or yellow, red, or variously spotted gem of blossom. Nature is not only bountiful in bestowing the useful and necessary, but profuse in pouring forth beauties to please and gratify the senses. Nature, however, is not profuse in vain—each of those brilliant cups and curiously tinted fibrils has its decided use; and all the parts combine to carry out the great conservative plans of creation. Like animals, plants are possessed of organs necessary to accomplish the purpose of nature—the reproduction and continuation of the species. From remote antiquity, the importance of the organs of the flower in perfecting the seed was known; and although Linnæus did not wholly make this discovery, yet it is to him we owe its complete elucidation about the year 1730. If we take a common wild rose, we may readily perceive the several parts of this structure. The green bulb attached to the flower stem is the *ovary*, where the seeds are matured. Above this is a green cup or *calyx*, notched into segments, and which serves to support the parts of the flower above. The flesh-colored leaves form the *corolla*, an undivided body in some plants, but in this, as in many others, divided into numerous *petals*; this corolla, which is generally the showiest part of all flowers, serves as a protection and de-

fence of the parts within. These consist of the *pistil* or female flower in the centre, and of the *stamens* or male flowers ranged around the circumference. The stamens carry on their tops an oblong loosely attached body, which is the *anther*, containing the *pollen* or fertilizing dust, which in due time bursts and scatters its contents on the *stigma* of the pistil. In some plants, the blossom contains only the pistils or female flowers, while the stamens grow on other plants, or on separate twigs of the same plant. In such instances, the pollen is borne along by the agency of the wind, or of the bee or other insects, roaming from flower to flower in search of food.

Such is a rapid glance of the arrangements of nature in even the lowliest plants. From the simple moss or lichen up to the tall cedar or the splendid magnolia, there are of course many diversities of this structure—but all are on one uniform plan, and every plant produces its “seed after its kind.” What a field here for the exercise of the attention, and for exciting pleasing and wonderful thoughts of that Being “who in wisdom has contrived the whole!” When the celebrated traveller, Mungo Park, found himself alone in the barren wilds of Africa, robbed, maltreated, and then deserted by cruel and savage robbers, he sat for some time gazing around him with amazement and terror at his utter abandonment. “Whichever way I turned,” he touchingly relates, “nothing appeared but danger and difficulty. I saw myself in a vast wilderness, and five hundred miles from any European settlement. At this moment, painful as my reflections were, the extraordinary beauty of a small moss in fructification irresistibly caught my eye. Can that Being, thought I, who planted, watered, and brought to perfection in this obscure part of the world a thing which appears of so small importance, look with unconcern upon the situation of creatures formed after his own image? Surely not! Reflections like these would not allow me to despair. I started up, and, disregarding both hunger and fatigue, travelled forward, assured that relief was at hand—and I was not disappointed.”

It was an old opinion, and one which is not quite eradicated even at this day,

that the earth, when dug up in any place, will spontaneously produce plants without seed. Nothing, however, can be more fallacious. It is true, the whole face of nature teems with seeds of plants that come floating on the air, and are borne about and scattered by birds and animals and other means; but in situations where no transmission of this kind can occur, experiment has proved that there will be no vegetation, and that every plant must proceed from some seed or graft, or root of a parent plant. Malpighi procured a quantity of earth dug from a great depth, and enclosed it in a glass vessel, whose mouth was covered over with several folds of silk, so as to admit air and water, but to exclude all such seeds as might come from without; the result was, that no plant grew from this earth. Mr. Keith performed a similar experiment. On 15th April, 1811, he procured a quantity of black clay taken from the depth of 100 feet, and exposed it to the action of the air and weather. It was placed upon a slate in one of the quarters of his garden. On the 15th of May, he placed upon another slate a similar quantity of earth taken from the depth of 150 feet, under a hand-glass, which was only removed to give the earth an occasional watering. No symptoms of vegetation appeared in either the one or the other till the 3d of September following, when several plants were found springing from the surface of the exposed clay, and one also from the surface of the insulated clay. The former proved to be plants of the common ground-sel, which was then coming up from seed over all the garden, and hence easily accounted for; the latter was a plant of *ranunculus sceleratus*, the seed of which, he says, was undoubtedly brought to the clay along with the water it was watered with, which was procured from a neighboring pond, around the edges of which the plant grew in profusion.

The various methods which nature employs to disperse the different varieties of seeds over the earth are truly wonderful. Many plants, when the seed is fully ripe, discharge it from the seed-cover or *pericarp* with a jerk or elastic spring. The common oat is thrown out in this way; and the loud crackling of the pods of the broom

in a dry sunshiny day, which is caused by their bursting and scattering about the contained seeds, must have been frequently noticed. The cones of fir-trees remain on the tree till the summer succeeding that on which they grow; when the hot weather commences, the scales of which they are composed burst open, and the seeds are scattered to a considerable distance. Then, there are the downy appendages which buoy up the smaller seeds, as the thistle and dandelion, carrying them through the air to great distances—the currents of rivers, floating down seeds from one district to another—and even the tides and currents of the ocean, which bear along the germs of vegetation from separate regions of the globe. Birds, too, by feeding on particular seeds, carry them to great distances, where being often voided entire, they vegetate. This is particularly the case with stone fruits, as cherries and plums.

The seed of a plant, as the common bean, consists of the outer skin or covering, within which is contained a starchy substance divided into two halves, called *cotyledons*. At the place where these two join, just opposite to the outer eye or black spot of the bean, is situated the germ or rudiment of the future plant. When the bean is put into the earth and subjected for a few days to heat, moisture, and air, it begins to germinate. The starch of the cotyledon is converted into sugar, and affords a nutritious juice for the sustenance of the germ, till this latter is old enough to push out roots into the soil and provide for itself. The cotyledons thus resemble the white and yolk of a bird's egg, or the milk supplied by a mammiferous animal. The springing germ consists of two parts—the rootlet, which invariably takes a downward course into the earth, and the leaf-bud, which as invariably aspires upward. This is an admirable provision in nature; for in whatever position a seed may fall into the soil, the leaf always reaches the surface, and thus is preserved, and vegetates; whereas, had it not received this fixed determination, it might have remained in the soil and rotted.

Some seeds have only one cotyledon, as the common oat, while the germinating buds or *sporules* of the inferior classes of

vegetables can not be said to possess a true cotyledon at all.

Besides propagation by seeds, many plants may be raised from slips or cuttings, roots, and buds, taken from a parent plant and placed in the soil. The reproductive power of most plants is generally very great. Some, it is true, produce only one, two, or three seeds, but others again an inconceivable number. A single capsule of tobacco often contains a thousand seeds. The head of the white poppy has produced eight thousand; and the capsule of the vanilla from ten to fifteen thousand. A plant of elecampane will produce altogether three thousand seeds; and a plant of the great cat's tail ten thousand; while a single stalk of spleenwort produces a million.

GATHERING OLIVES.



HE method of gathering the olive varies in different parts of the Peninsula. The most general way in Portugal, however, is to beat them down with long poles, and afterward collect them in sacks, or baskets. Both the oil and the fruit are inferior by this method, as the fall bruises the produce too much. The Spaniards gather them all by hand, and though the process is more laborious and more expensive, ample compensation is made in the superiority of these olives over those beaten down by poles. When intended for food they are prepared in two ways: one is simply to cut them and soak them in salt and water, adding a few herbs to give a flavor; the other is first to dry them in the sun, whereby they become black, and afterward to put them in jars, with oil, salt, pepper, or other spices, adding also a few herbs. When eaten by the natives, they are invariably flavored with oil and a little vinegar. With us, olives are used only at the tables of the wealthy as a luxury—disagreeable enough to those who are unaccustomed to their flavor; but in the countries of their growth they are



Gathering Olives.

essential articles of food. The shepherd takes nothing with him to the field but a little bread, a flask of wine, and a horn of olives; the carretiero, or carman, carries with him only his wineskin, his loaf, and olives; and the laborer in the field, and the peasant in his cottage, often have nothing more till nightfall: indeed bread and olives form an extremely nutritive and refreshing diet.

The olive-tree is extremely picturesque and grotesque in its form; the trunk sometimes consisting of a huge mass of decayed wood, with young and graceful branches springing from the top and sides; at other times a large and bushy tree may be seen supported upon two or more small fragments of the same apparently dead wood, while the remainder of the trunk is completely hollowed out. The wood burns readily when green, and the leaves emit a strong sparkling flame, and apparently contain much oil. The ground between the olive-trees is not lost, being frequently sown with grain, and sometimes, though rarely, planted with vines. The deep color of the foliage of this most useful tree gives a solemn character to the landscape, and subdues the usual vivid brilliancy of color—the effect of the clearness of the atmosphere and the heat of the climate. Green, such as adorns our own meadows, is a color never seen in a Portuguese landscape: the scanty herbage, which springs up spontaneously, is burned by the sun into a bright straw color; and the soil, through the great heat, becomes almost white. On the sides of the hills, however, the beautiful pale purple flower of the wild thyme, and the delicate gray of its leaf, contrast prettily with the surrounding glare; and it is only the olive with its deep hues and the low bushy vines which can claim the name of green. The cultivation of the orange and the lemon is confined chiefly to the neighborhood of large cities, very few groves of these fruits being met with in the open country.

The manner of rearing the vine is somewhat peculiar in the Peninsula. While in Italy, and in some parts of France, the vine gracefully curls around the poles placed in the earth for their support, and the rich fruit hangs in large bunches from

every branch; in the Peninsula, the vine is cut down almost to the ground, and in winter has much the appearance of a withered and blackened stump. With spring, however, the branches shoot out in every direction till they attain the size of a currant-bush, which, indeed, they very much resemble. Only a few of these branches are suffered to remain, and those which are left are cut at the end to prevent them running into useless wood: the vine thus trimmed produces from eight to a dozen bunches; but these are of a superior flavor, and make the best wines. When the grapes are gathered, which is done with great care, and mostly by women, the inferior bunches are suffered to remain for a day or two, when they also are gathered, and manufactured into a wine of lower quality, or hung up to dry for winter consumption.

PLEASURE AFTER PAIN.



WE greatly admire the sentiment which the poet Dryden expresses in one of his most celebrated odes, "Sweet is pleasure after pain."

We have often experienced its truth,

and are quite in love with the paradox, that our miseries both multiply and heighten our enjoyments. The Creator, undoubtedly, could have prevented the entrance of evil, both physical and moral, into our world. We can easily imagine a condition of things from which pain, in all its shapes, should have been excluded. We can fancy a state fair and smiling, as we believe Eden to have been—its beauty without one marring speck, its happiness without a single particle of alloy. We can realize, in thought at least, that golden age about which the poets have sung so sweetly, and on which the mind loves to linger. But in such a scene there must have been wanting one very exquisite kind of pleasure—"the pleasure after pain;" the inhabitants of such a world

must have been deprived of a species of joy as high in its tone, perhaps, as any we taste. There might, in such a system of things, have been much worthy of its author, and reflective of his glory. The powers of nature might have produced as astonishing results as they do at present, and have been balanced with as exquisite skill. The stars might have shone in a firmament as deep and blue as that in whose bosom they now burn. The planets might have woven their mystic dance round a sun as vast and lustrous as that they circle now. The clouds might have been clothed in as rich a purple. The flowers might have yielded as delicious a perfume. The mountains might have reared their heads as majestically on high, the brooks prattled as merrily, and the rivers rolled as grandly to the sea. The seasons might have performed their wonted rounds; the shower and the sunshine combined their fructifying energies, and trees and herbs clothed the face of the earth. There might also have been creatures to partake of what was thus liberally provided; and earth, and air, and water, have teemed with sentient existences. There might, too, have been—the crown and ornament of the whole—a being gifted with reason and affection, capable of admiring the beauty such a system would present, and tracing the wisdom from which it sprang; qualified not only to enjoy the good, but to love and adore the Giver. This in truth—the absence of evil supposed—is but our notion of primeval paradise. In such a world, however, there would, as we have said, have been wanting that very exquisite kind of delight derived from the remembrance of pain! The power of contrast comes to our aid in the creation of this joy; contrast, indeed, is the principal element of the happiness we are speaking of. The classical reader will promptly recall the use which the hero of the *Æneid* made of the “pleasure after pain” principle, when he was beset with hardships and dangers. He revived his own spirit, and he cheered the drooping spirits of his companions, by adverting to the future, and intimating the probability, that the time might come when the recollection of what they were then enduring would prove

a source of enjoyment. “Perhaps,” exclaimed the son of the venerable Anchises, “it will one day yield us delight to remember these sufferings.”

We detect in the kingdom of nature emblems of the principle in question; as, indeed, all great and lovely principles have their adumbrations in nature. Earth, with its grand and beautiful scenes, was educed from an unshapely mass, “without form and void.” The gold which glitters most lustrously is that which the fire has tortured into purity. There is no calm so tranquil as that which succeeds the hurricane; no sunshine so bright and gladdening as that which breaks on the earth through an April shower. Were it not for the power of variety and contrast, what joy should we have from the most delicious of the seasons? Do not the bleakness and dreariness of winter lend a charm to the beauties of the spring and the glories of summer? And do we not detect in these, and numerous other instances, the operation and the type of the sentiment we profess so warmly to admire—“sweet is pleasure after pain”?

The power of the law of contrast is indeed remarkable. We know, for example, that a sweet and lovely scene never looks so attractive as when placed side by side with one which is rugged and grand; that never does a cottage home, with its blooming garden and patch of verdure around it, seem so bewitching an object as when situated at the base of some towering Alpine summit. Beauty reposing on the lap of grandeur, is an idea with which every enthusiastic admirer of fine scenery is familiar. Painters know this principle well, and in selecting subjects for their sketches, they are fond of such a combination of the beautiful and sublime as that in question. Again, in delineating character, poets and novelists avail themselves of this same law to heighten the effect of their descriptions. We have placed side by side the gentle and the stern, the timid and the brave, the intriguing and the open, the selfish and the generous; opposite qualities, in short, are placed in vivid contrast with one another, so that, just as the cottage home we have supposed looks all the more charming that it reposes at the foot of the

gloomy Alpine precipice, the attributes of virtue wear all the more enticing aspect when seen in immediate contrast with those of vice.

Now, it is this law that comes into operation when the remembrance of former sorrows and hardships comes to heighten present joys. We look back on the past. We remember its struggles. We think of the difficulties and dangers we had to contend with, and which, happily, we have now surmounted. We contrast our present with our past condition—the bright with the gloom—and the contrast is delightful. Indeed, our joy is comparatively a tame thing apart from this retrospect. The recollection of pain lends a peculiar zest to pleasure: Health is relished far more keenly by those who have just recovered, than by those who have never lost it. The rest of the laboring man is sweetened by the remembrance of his toils. The shore is made a thousandfold dearer to the mariner when he recalls the rude buffetings of the ocean. There is much of the human heart in the lines, we know not whose they are:—

"I envy not the dame, whose lord
Was never forced to roam,
She never knew the boundless joy
Of such a welcome home!"

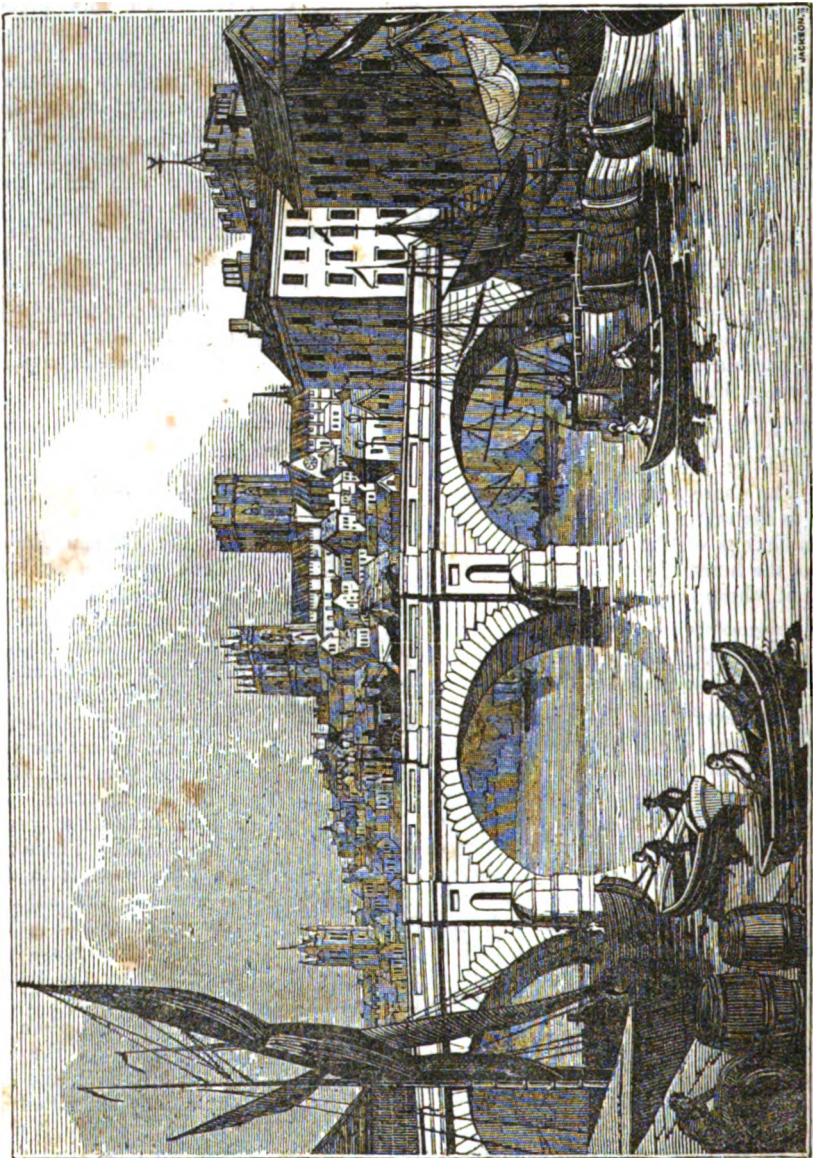
They who never knew the agony of one of those partings, which Byron says "press the life from out young hearts," can never know the real joy of meeting again. Every moment of anxious expectation—every tear rushing to the eye—every sob bursting from the bosom—is silently laying up an accession to the ecstasy of the hour when those sobs shall all be stilled, and those tears kissed away. They, if in this vale of tears there be any such, whose attachment is never put to such a test, and whose hearts are never visited by such a pang, can not realize a happiness worthy of being named with that which has come bright from the furnace of anxiety and anguish. To be relieved from a state of racking suspense—to vanquish a difficulty we dared not hope we should ever be able to overcome—to be rescued from the pressure of want, or relieved from acute bodily pain—to be reconciled to one dearly loved and with whom we had quarrelled—these, and such as these,

whenever experienced, bring illustrations of the truth of the maxim we have been considering: "sweet is pleasure after pain." And, in connexion with higher motives to submission when we are suffering, this may help to console and encourage us, that to look back on past trials will one day be the means of heightening our joys. This thought, too, should go far to reconcile us to our present condition, and induce us to seek with ardor that purer and nobler state after which we aspire. It can not, indeed, be doubted that the recollection of the past will be one main element in future blessedness. The toils and trials of our pilgrimage will help to deepen our ecstasy when we have reached that abode where there is no pain.

THE CITY OF YORK.



IN the Roman times, York may be said to have been, more than London, the capital of England. The Roman emperors who visited the country for the most part took up their residence at York. Here the emperor Severus died in the year 211, after having made York his headquarters during the three or four preceding years which he spent in the island. Three remarkable mounds, a little west from the city, still bear the name of the hills of Severus: and many other remains that have been discovered in later ages attest the Roman domination. After the establishment of the Saxon heptarchy, York became the capital of the kingdom of Northumberland. Although, on the arrival of the Normans, this district, like the rest of the kingdom, quietly submitted in the first instance to the invaders, it was the scene on which, soon afterward, a struggle was made by a powerful confederacy of Saxon lords and their retainers to regain their independence. This insurrection, however, was soon crushed by the activity and energy of the conqueror, who, laying siege to York, starved it into



View of the City of York.

a surrender in six months, and then, after his usual fashion, erected a fortress in the close neighborhood of the town, to keep it for the future in awe. This was the origin of the present castle, situated at the southern extremity of the city, in the angle formed by the confluence of the two rivers. At a little distance is a ruin called Clifford's Tower, which was the keep of the old castle, and took its name from the Cliffords, whom William appointed the first governors of that stronghold. In early times parliaments were frequently held at York; and in 1299, Edward I., even removed the courts of law from London to this city, where they continued to sit for seven years.

The city of York stands in the midst of an extensive plain, the largest certainly in Great Britain, if not, as has been sometimes asserted, in Europe. Viewed from the immediate neighborhood, the peculiarity which most strikes the eye is the ancient wall by which it is encompassed—supposed to have been built by Edward I., about 1280, on the line of the old Roman fortification. This wall, which had fallen greatly into decay, never having recovered from the damage it sustained when the city was besieged by Sir Thomas Fairfax and General Lesley, in 1644, has been lately repaired, and a walk is now formed along the top of part of it, which is a favorite resort of the inhabitants.

Seen from a greater distance, York presents a crowd of pointed spires shooting up from the midst of the houses, the indications of those numerous parish churches of which it still retains twenty-three out of forty-two which it formerly possessed. Far above all these, however, rise the enormous bulk and lofty towers of the Minster, which stands in the north part of the city, and to the east of the river. In the opposite quarter is the castle, a large building, erected about the beginning of the last century, on the site of the Conqueror's Fortress, and serving as a prison for criminals and debtors. Besides the county prison are the county hall, the courts of Assize, and other public buildings.

The entire circuit of the walls of York is about three miles and three quarters, being somewhat less than that of the walls

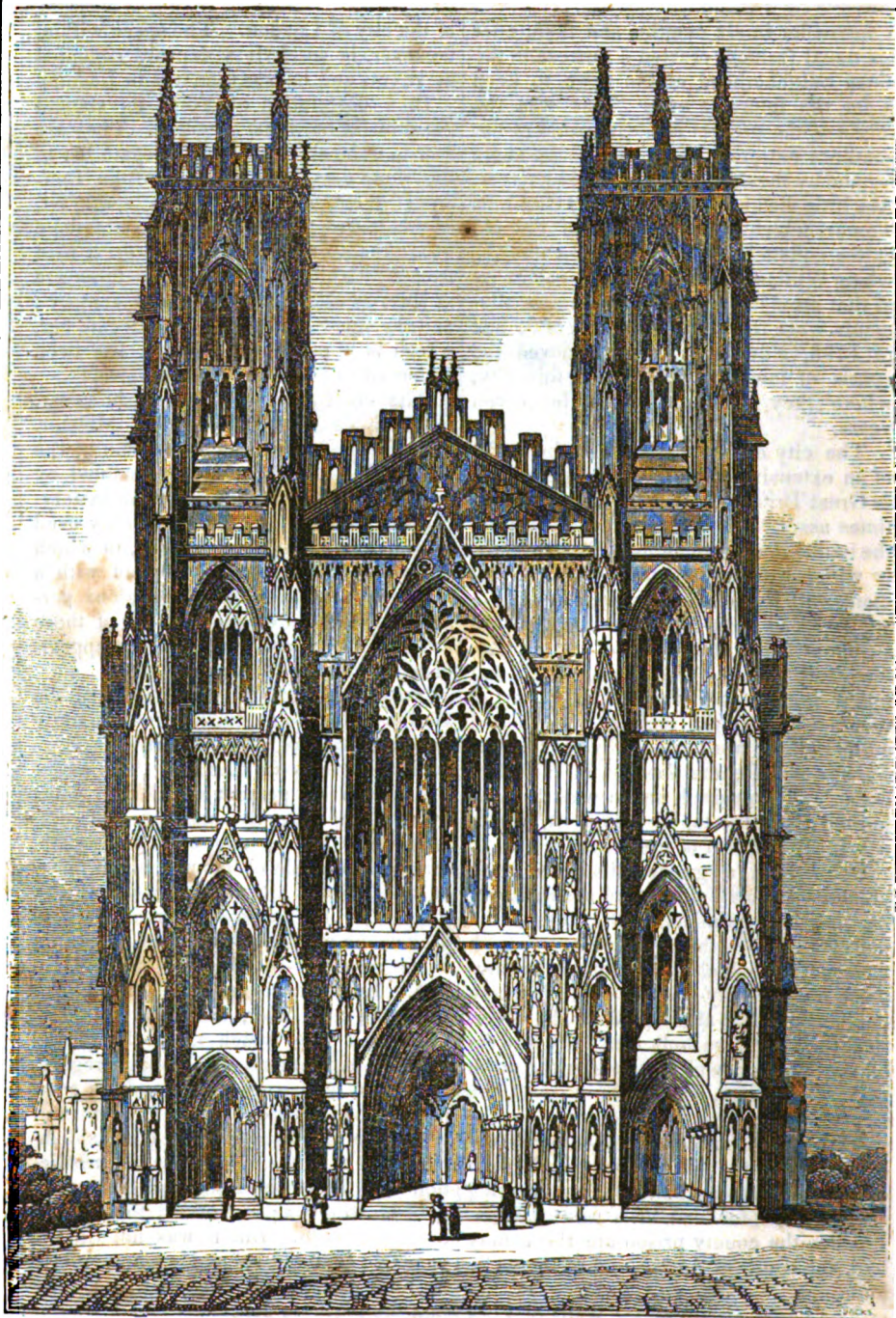
of the city of London. The space within, however, is much less densely occupied by streets and houses than it is in London.

In a description of York, its ancient gates ought not to be forgotten. They are four in number, namely, Micklegate bar to the southwest, over the entry from London; Walmgate bar to the southeast, Monk bar to the northeast, and Bootham bar to the northwest, facing the great road from Scotland. All these structures are at least as old as the thirteenth century; and the inner arch of the Micklegate bar, which is a portion of a circle, has been supposed to be of the Roman times.

The chief glory of this city, however, is the noble cathedral, of York Minster. The term *Minster*, is a corruption of the Latin *Monasterium*, a house tenanted by monks, or what we still call a monastery. Minster, however, is now generally used to designate a cathedral church, to which it was no doubt originally applied with a reference to the retinue of religious persons forming the chapter of each of these establishments, and giving it the appearance of a monastic community.

Among buildings in what is called the Gothic style, York Minster has generally been regarded as without a rival in England, or perhaps in Europe. The establishment of the present see of York dates from a considerably more recent era. Augustine, the apostle of the English, arrived in the isle of Thapet, which formed part of the kingdom of Kent, in the year 597. He was soon after consecrated archbishop of Canterbury, and according to the generally-received account, died in 605. Kent, however, was, as yet, and for some time after, the only portion of the island into which the light of the gospel had penetrated. Pope Gregory, indeed, by whom Augustine and his companions had been deputed, had commanded that an archbishop should be established at York, to exercise the same jurisdiction over the northern parts of the country as Augustine was authorized to exercise over the south. But it was not till the year 624 that any attempt even seems to have been made to introduce Christianity into the northern district.

This magnificent pile was in part erected by several successive archbishops.



West Front of York Minster.

The whole was probably finished, and the Minster brought to the state in which we now see it, about 1410 or 1412.

It is perhaps the most perfect example to be anywhere found of the history and progress of the Gothic style during the period of not much less than two centuries, which its construction occupied. In this place we can only remark generally, that a continued and regular improvement in grace and lightness of form, and a more and more lavish profusion of minute and elaborate ornament, will be found to form the leading characteristics of that progress in England, during the whole of the period in question.

York Minster, is built in the form of a cross, the longer bar, forming the choir and nave of the church, lying, as usual, east and west, and the shorter, called the transept, north and south. Over the centre of the building, supported on four massive pillars, rises a grand tower to the height of 213 feet from the floor. This is said to be only a portion of the altitude originally designed by the architect, who intended to surmount this stone erection by a steeple of wood covered with lead, had he not been deterred by a fear lest the foundation should prove insufficient to sustain so great a weight. Over the west end of the building are two other towers or steeples rising to the height of 196 feet. The whole length of the building from east to west is 524½ feet, and that of the transept, from north to south, 222. The length of the choir is 157½ feet, and its breadth 46½; in addition to which the east end of the choir contains a chapel behind the altar dedicated to the Virgin, making an entire length of 222 feet. The length of the nave is 261 feet; its breadth (including the aisles), 109; and its height, 99.

York Minster has not the advantage of standing upon a height; yet its enormous mass makes it a conspicuous object from a great distance, and nothing can be grander or more imposing than the aspect which its lofty buttresses and gray towers present as they are seen rising over the surrounding houses of the city, which look like the structures of a more pigmy generation beneath the gigantic and venerable pile. For the present the grandeur of the Minster must be sought for principally in

its interior. The effect of the whole prolonged and lofty extent, as seen on entering from the great west door, is perhaps as sublime as any ever produced by architecture. Under favorable circumstances, such as the rich illumination of a setting sun, the impressions of awe, and veneration, and we may add, delight, produced upon the mind by the grandeur and beauty of this wonderful building, are perhaps superior in intensity to the effects of any other work of man's hands. We doubt whether the finest Grecian temple could ever so touch the hidden springs of enthusiasm in our nature. The choir is divided from the nave by a stone screen; but this ornamental partition is so low as not to intercept the view of the portion of the roof beyond, nor "the dim religious light" streaming from the magnificent "storied window" that fills the east end of the building. The screen and the great east window are two of the proudest ornaments of the cathedral. The former is a work in the very richest style of ornamental carving; and fortunately it is in almost perfect preservation. It is divided into compartments by fifteen inches, which contain the statues of the English kings from the conqueror to Henry VI. inclusive. The great east window is of the vast dimensions of 75 feet in height by 32 in breadth. It is formed of above 200 compartments of painted glass. The fabrication of this noble specimen of art was begun in 1405, by John Thornton, of Coventry, whose agreement was to complete it in three years, during which time he was to have a salary of four shillings a week, with 100 shillings additional per annum, and 10*l.*, more on finishing the work, if it should be done to the satisfaction of his employers.

Attached to the northern transept of the cathedral is the Chapter house, an octagonal building, with a conical roof, the interior of which consists of one apartment of great magnificence. It is 63 feet in diameter and 67 feet 10 inches in height, the arched roof being supported without pillars. Around are arranged the stalls, forty-four in number, formed of the finest marble, and having their canopies sustained by slender columns. A window occupies each of the eight sides,



Interior of the Choir of York Minster.

except that in which is the entry from the transept.

York Minster contains a good many tombs, some of them of considerable beauty; but these we can not here attempt to describe. Among the curiosities preserved in the vestry we can notice only the ancient chair, said to have been used at the coronation of some of the Saxon kings, and on which the archbishop is still on certain occasions accustomed to seat himself; and the famous horn of Ulphus, one of the most curious relics of Saxon antiquity which have been preserved to our times.

York Minster was very nearly destroyed in 1829, by the act of an insane individual, Jonathan Martin, who, having concealed himself in the choir after service the preceding evening, contrived to kindle a fire in that part of the building, which was not discovered till seven o'clock in the morning. By this time the wood-work of the choir was everywhere in a blaze; but by great exertions, and especially by sawing through the beams of the roof, and allowing it to fall upon the flames below, the conflagration was in a few hours subdued. The damage done consisted in the entire destruction of the stalls of the choir and of the 222 feet of roof by which that part of the building was covered. The organ over the screen was also destroyed, but the screen itself escaped uninjured. A public subscription was immediately commenced for the repair of a loss which was justly considered a national one, and the sum of £50,000 was collected within two months. The task of effecting the restoration was committed to Mr. Smirke; and the work was admirably completed in the spring of 1832. The scrupulous care with which the restoration of York Minster has been accomplished, so as to preserve every detail of the building, is highly creditable to the architect and his employers. The roof has been executed in teak, and the carved work of the choir in oak. With the exception that the choir looks cleaner and fresher than formerly, a person unacquainted with its destruction would be unable to perceive any change. The organ, in York Minster, was one of the finest in Europe.

THE WORLD.



HE complete revolution in the condition of the world, during the past century, which its commercial transactions indicate, has been effected by the inventions of genius, and not by the operations of arms. The agents, by whose instrumentality this result has been accomplished, have in the main, sprung up where they were little expected to arise. The United States, scarcely free from the evils consequent upon a long and bloody struggle for their independence, began to manifest that depth of research and enterprise of action, which elevated their ancestry to the empire of Europe. In rapid succession, men came into notice then, who were resolved to improve upon the inventions of the past. Applying to the most useful purposes the quadrant, which their countryman, Godfrey, had years before constructed, and availing themselves of the advantages consequent upon a knowledge of the nature and application of electricity, which had been fully established by the incomparable Franklin, they went on to erect a vast system of practical science, upon which schemes of the most extensive benefit to the human race have been perfected. Fulton, in the latter part of last century, conceived the bold idea of propelling vessels by steam-power, against the most rapid currents, which although tried before in England, had proved a failure. Confident of eventual success, this fearless philosopher, notwithstanding he was pronounced a visionary in Europe and America, entered upon a train of experiments, which finally placed commerce upon the basis which it now occupies.

Learning, it is true, received a temporary shock from the revolutionary movements which characterized the early portion of the present century. In England, Scotland, the United States, and France, its progress, however, has been in advance of previous ages. England and Scotland substantiate the position, by the attainments of Herschel, Lardner, Brewster, and Arrott, in astronomy, optics, and math-

ematics; of Whewell, Mills, McCauley, Dimond, Brougham, Wakely, and De Lolme, in ethics and politics; of Cooper and Carpenter, in physics; of Byron, Rogers, Moore, Campbell, Scott, and Montgomery, in poetry; of Dickens in descriptive composition; of Sheridan, Bulwer, and Jerrold, in dramatic works; and of Macready in tragic performances.

The United States demonstrates the same truth, in being able to enumerate among her citizens the names of Davies, Bowditch, Adrian, and Gummere, as mathematicians; of Franklin, Godfrey, Rush, Fulton, Hare, Day, and Silliman, in natural philosophy; of Jay, Story, Marshall, and Kent, as jurists; of Wayland, Vethake, Channing, Upham, Sparks, Jarvis, Wilson, and Potter, as political and moral writers; of Dwight, Barlow, Longfellow, Bryant, Willis, Whittier, and Halleck, as poets; of Forrest, Murdock, Scott, Booth, and Charlotte Cushman, in the drama; of Payne, Conrad, Stone, and Bird, as tragic composers; of Irving, Cooper, and Neal, as novelists; of Bancroft, Miner, and Prescott, as historians; and of West, Alston, and Sully, as artists.

France also attests the same fact, by the researches of Esquiroll, Arago, and Guizot, in the natural sciences; and by the works of Thiers, Dumas, Sue, Bernard, Fevel, and Scribe, in polite and elegant literature.

The greatest impulse has been given to the advance of the arts and the improvement of the age, by the liberal and fostering course of policy pursued by Louis Philippe in relation to inventions, and in the cases of learned men; such a course, in fact, as must to all ages rank that monarch among the greatest patrons of science that Europe has ever produced.

Germany still maintains the elevated position as a scientific nation, which she has held for ages, and by the works of Von Savigny and Gans, Raumer and Rotteck, Grabbe and Brentano, Heine and Pichler, Muller and Wurm, has greatly contributed to the common stock of the republic of letters; while Italy and the northern powers, though politically checked and severed by the interposition of her Austrian and Prussian influences, cultivate a literature in common with her, in all its

departments. Though it must be confessed that among all these nations there is a greater desire to imitate the English standards than to elevate their own, which has the sanction of the past in its recommendation. The long and devastating civil wars which have raged throughout the peninsula of Europe, have produced their necessarily-retarding influences upon the cause of science, the progress and improvement of which this place had been previously hailed with great delight by its friends and patrons throughout Christendom.

The present century has been, and still continues to be, remarkably prolific in the means for the diffusion of useful knowledge. Institutions adapted to this end, have sprung up, both in Europe and America. Of this description are the associations for the founding of libraries designed to circulate among the masses of society; the publication of magazines upon a principle of cheapness, which ensures the possession of them by the humblest members of society; the dissemination of religious knowledge among the savage and pagan portions of our race, and for the establishment of those noiseless agents for good—the sabbath schools—which are now pervading every part of the world. In the protestant United States of America, the most efficient means have been taken in this great work, by the endowment, at public expense, of colleges and seminaries of learning, as well as by the adoption of the certain means of information, in the creation of public schools, in most of the states, supported by a direct tax upon the citizens, and an annual legislative appropriation. Some portions of the British possessions in North America have followed this noble example; and to a mind which has contemplated the increasing thirst for knowledge, and for years marked the course of the catholic republics of South America, as evinced by the large number of students, which flock thence to the colleges of the United States, the conviction that they will eventually adopt the same great and certain means of perpetuating their freedom, contain nothing novel or at variance with the process of fair reasoning.

OCTOBER.



OCTOBER, so named from the two Latin words, *octo* and *imber*, although it is now the tenth month in our calendar, was formerly the eighth in the calendar of Romulus : by our Saxon ancestors called *Wyn-monat*, or wine month.

The great business of nature with respect to the vegetable creation at this season, is *dissemination*. Plants having gone through the progressive stages of springing, flowering, and seeding, have at length brought to maturity the rudiments of a future progeny, which are now to be committed to the fostering bosom of the earth. This being done, the parent vegetable, if of the *herbaceous* kind, either totally dies, or perishes as far as it rose above ground ; if a tree or shrub, it loses all its tender parts which the spring and summer had put forth. Seeds are scattered by the hand of nature in various manners. The winds, which at this time arise, disperse far and wide many seeds which are curiously furnished with feathers or wings for this purpose. Hence plants with such seeds are, of all, the most universally to be met with ; as dandelion, groundsel, ragwort, and thistles. Other seeds by the means of hooks, lay hold of passing animals, and are thus carried to distant places. The common burs are examples of this contrivance. Many are contained in berries, which being eaten by birds, the seeds are discharged again uninjured, and grow where they happen to fall. Thus carefully nature provided for the distribution and propagation of plants.

The gloom of the falling year is in some measure enlivened, during this month especially, by the variety of colors, some lively and beautiful, put on by the fading leaves of trees and shrubs.

It is just at this point of time, when the trees and shrubs exhibit such a variety of tints, that landscape painters are particularly fond of exercising their art.

To these temporary colors are added the more durable ones of ripened berries,

a variety of which now enrich our fields and pastures. Among these are particularly distinguished the hip, the fruit of the wild rose ; the haw, of the hawthorn ; the blackberry, of the bramble ; and the berries of the alder, holly, and woody nightshade, and of the spindle-tree, the last of a most beautiful color. These are a providential supply for the birds during the winter season ; and it is said that they are most plentiful when the ensuing winter is to be most severe.

The common martin, whose nest, hung under the eaves of our houses, affords so agreeable a spectacle of parental fondness and assiduity, usually disappears in October. As this, though one of the smallest of the swallow-kind, stays the latest, its emigration to distant climates is less probable than that of the others. The sand-martin, which breeds in holes in the sandy banks of rivers, and about cliffs and quarries, most probably passes the winter in a torpid state in those holes.

The weather about this time is sometimes extremely misty, with a perfect calm. The ground is covered with spider's webs innumerable, crossing the path, and extended from one shrub to another. It is a frequent appearance in this season, and a certain indication of a fine and warm day.

Mr. White gives the following account of them, in his history of Selborne : "The remark that I shall make on these cobweb-like appearances, called gossamer, is, that strange and superstitious as the notions about them were formerly, nobody in these days doubts but they are the real production of small spiders, which swarm in the fields in fine weather in autumn, and have a power of shooting out webs from their tails, so as to render themselves buoyant and lighter than air. Every day in fine weather, in autumn chiefly, do I see those spiders shooting out their webs and mounting aloft ; they will go off from your finger, if you will take them into your hand."

These webs are often formed into long white filaments, and may be seen floating in the air ; to this appearance Shakspeare alludes :—

"A lover may bestride the gossamer
That idles in the wanton summer air,
And yet not fall, so light is vanity."

THE NEWFOUNDLAND DOG.



HIS powerful, intelligent, and docile animal, which in its unmixed state is certainly the noblest of the canine tribe, is a native of the country the name of which it bears, and may be considered as a distinct race. Its introduction into this country is of comparatively recent date; and the fine animal known to us by the name of Newfoundland dog is only half-bred, and of size inferior to the dog in its native state, when it measures about six feet and a half from the nose to the extremity of the tail, the length of which is two feet. In its own country it only barks when greatly irritated, and then with a manifestly painful effort, producing a sound which is described as particularly harsh. Its exemption from hydrophobia in Newfoundland appears to be well authenticated.

The dog is employed by the settlers as a beast of burthen in drawing wood from the interior to the coast. Three or four of them yoked to a sledge will draw two or three hundred weight of wood with great facility for several miles. In this service they are said to be so sagacious and willing as to need no driver or guide; but, having delivered their burden, return without delay to the woods in the expectation of receiving some food in recompense for their labor. From the activity of his disposition, the Newfoundland dog delights in being employed; and the pride of being useful makes him take uncommon pleasure in carrying in his mouth for miles baskets and other articles, of which, as well from that satisfaction as from the fidelity of his character, it would be dangerous for a stranger to dispute possession with him. In many respects he may be considered as a valuable substitute for the mastiff as a house-dog.

The Newfoundland dog is easily satisfied in his food. He is fond of fish, whether fresh or dried; and salt meat or fish is more acceptable to him than to most other animals, as well as boiled potatoes and cabbage. When hungry,

however, he has not very strong scruples about appropriating such flesh or fish as falls in his way, or even of destroying poultry or sheep. For the blood of the latter animal he has much appetite, and sucks it from the throat without feeding on the carcass.

It is well known that the Newfoundland dog can swim very fast, dive with ease, and bring things up from the bottom of the water. Other dogs can swim, but not so willingly, or so well. This superiority he owes to the structure of the foot, which is semi-webbed between the toes; thus presenting an extended surface to press away the water from behind, and then collapsing when it is drawn forward, previous to making the stroke. This property, joined to much courage, and a generous disposition, enables this dog to render those important services in the preservation of endangered life, of which such numerous instances are recorded, and of which our engraving affords an illustration.

A Newfoundland dog, kept at the ferry-house at Worcester, was famous for having, at different periods, saved three persons from drowning; and so fond was he of the water, that he seemed to consider any disinclination for it in other dogs as an insult on the species. If a dog was left on the bank by its master, and, in the idea that it would be obliged to follow the boat across the river, which is but narrow, stood yelping at the bottom of the steps, unwilling to take the water, the Newfoundland veteran would go down to him, and with a satirical growl, as if in mockery, take him by the back of the neck and throw him into the stream.

A native of Germany, fond of travelling, was pursuing his course through Holland, accompanied by a large Newfoundland dog. Walking one evening on a high bank, which formed one side of a dike, or canal, so common in that country, his foot slipped, and he was precipitated into the water, and, being unable to swim, he soon became senseless. When he recovered his recollection, he found himself in a cottage on the opposite side of the dike to that from which he had fallen, surrounded by peasants, who had been using the means so generally practised in that country for



Newfoundland Dog.

restoring animation. The account given by the peasants was, that one of them returning home from his labor, observed, at a considerable distance, a large dog in the water swimming and dragging, and sometimes pushing, something which he seemed to have great difficulty in supporting, but which he at length succeeded in getting into a small creek on the opposite side to that on which the men were.

When the animal had pulled what he had hitherto supported, as far out of the water as he was able, the peasant discovered that it was the body of a man. The dog, having shaken himself, began industriously to lick the hands and face of his master, while the rustic hastened across; and, having obtained assistance, the body was conveyed to a neighboring house, where the usual means of resuscitation soon restored him to sense and recollection. Two very considerable bruises, with the marks of teeth, appeared, one on his shoulder, the other on the nape of the neck; whence it was presumed that the faithful animal first seized his master by the shoulder, and swam with him in this manner for some time; but that his sagacity had prompted him to let go his hold, and shift his grasp to the neck, by which he had been enabled to support the head out of the water. It was in the latter position that the peasant observed the dog making his way along the dike, which it appeared he had done for a distance of nearly a quarter of a mile. It is therefore probable that this gentleman owed his life as much to the sagacity as to the fidelity of his dog.

HEROES.



MAKING the duration of the fame or notoriety of heroes a distinguishing characteristic of the tribe, we shall find this description of persons exhibiting a very remarkable sort

of variety. Descending from those gigantic forms which hold the world in awe, we shall find them "growing small by degrees and beautifully less." There is the hero of all time, the hero of a particular period or epoch, the hero of a twelvemonth, the hero of a week, of a day, of an hour, nay, there is, for we have often seen him, the hero of a minute. His is short-lived fame indeed, but enough to satisfy some ambitions. We have known the hero of a minute very proud of his brief notoriety, although he had hardly time to taste the intoxicating beverage before its towering effervescence, its deceitful froth, had vanished, leaving behind only a little vapid moisture.

The hero of all time is generally a great warrior—a mighty manslayer—one who has laid countries waste, and filled many lands with the lamentations of widows and fatherless children—a sort of personage for whom the world entertains an extraordinary reverence and respect.

The hero of a particular period or epoch is generally a statesman of an amount of talent or force of character sufficient to keep the world talking of him while he lives, but not enough to keep him in its remembrance after he is dead.

The hero of a twelvemonth is, for the most part, a political one—a gentleman who has taken the popular side of some rather toughish popular question, and has advocated it with vigor—a bustling, loud speaking, energetic fellow, with a capital front, whom nothing can daunt, who triumphs in victory, but who is never abashed by defeat.

The hero of a week is also a political one. He is a gentleman who has said some strong things on some agitating topic of the day, but who is never heard of again. He came suddenly into the world's presence, and as suddenly made his exit. Nobody can tell where he goes to, but the darkness in which he is enshrouded is so intense, that he seems to have sunk, as it were, into a sea of pitch or tar, thick, dense, impenetrable.

The remaining classes of heroes are men of local notoriety. The field of their fame is small; but they themselves do not look a bit smaller on that account. The eyes with which they contemplate their

own greatness have a magnifying power which gives them a very pleasant and comfortable view of their own importance.

The hero of a day and the hero of an hour being much alike in their leading characteristics, we do not think it necessary to treat them separately. They are gentlemen who, to the astonishment of all who knew them, and to the no small astonishment of themselves, have made a pithy speech at a public meeting. They have knocked the arguments of the opposing party to shivers, and shown clearly how supremely ridiculous their ideas on the subject were. The speech is quite a hit, and creates a prodigious sensation at the moment. On the breaking up of the assembly the successful orator is pointed out, and on every side we hear, in low whispers, "There he is! there he is!—that's him! that's him!" The succeeding night, however, alas! sleeps all this reputation away; and by the morning both speech and speaker have been all but utterly forgotten.

Then there is the hero of a minute, the most amusing of the whole five. We might adduce many specimens of the class to which he belongs: one may be quite sufficient to convey a pretty correct idea of him. You have no idea, gentle reader, who he can possibly be—what sort of feat it is that gives birth to a fame so evanescent—so very short-lived. Have you ever been to a very crowded meeting in a very hot day, perhaps in July or August, when everything is glowing, melting, burning, perspiring—when you might broil steaks on the slates of your own or any other house—when vegetation is burnt up, every blade of grass looking like a brass wire—when running streams become weak and sickly, their lively brawling subsiding into a feeble and scarcely audible trickle—when every tongue is parched, and every living thing tortured by an unendurable thirst: have you, dear reader, ever been to such a meeting under such circumstances? The heat of the place is stifling, the crushing and squeezing dreadful—a feeling of suffocation oppresses the whole assembly; you think of the black-hole of Calcutta, of the horrors of which you never had half so lively an idea before. All of a sudden you hear some one

call out in a loud, determined tone—"Let down the windows!" You look in the direction of the voice, and perceive a little stout man, with a very red face, the perspiration streaming down his cheeks, and his eyes starting from their sockets, who has contrived to raise himself by some means or other above the level of the assemblage, and is making desperate efforts to reach one of the windows. All eyes are fixed upon him, and an expression of approbation of the daring little man's temerity is on every countenance. That daring little man—he who shouted, "Down with the windows!" and who afterward seemed to stand aghast at his own courage—is the hero of a minute!

ADAM'S PEAK, IN THE ISLAND OF CEYLON.

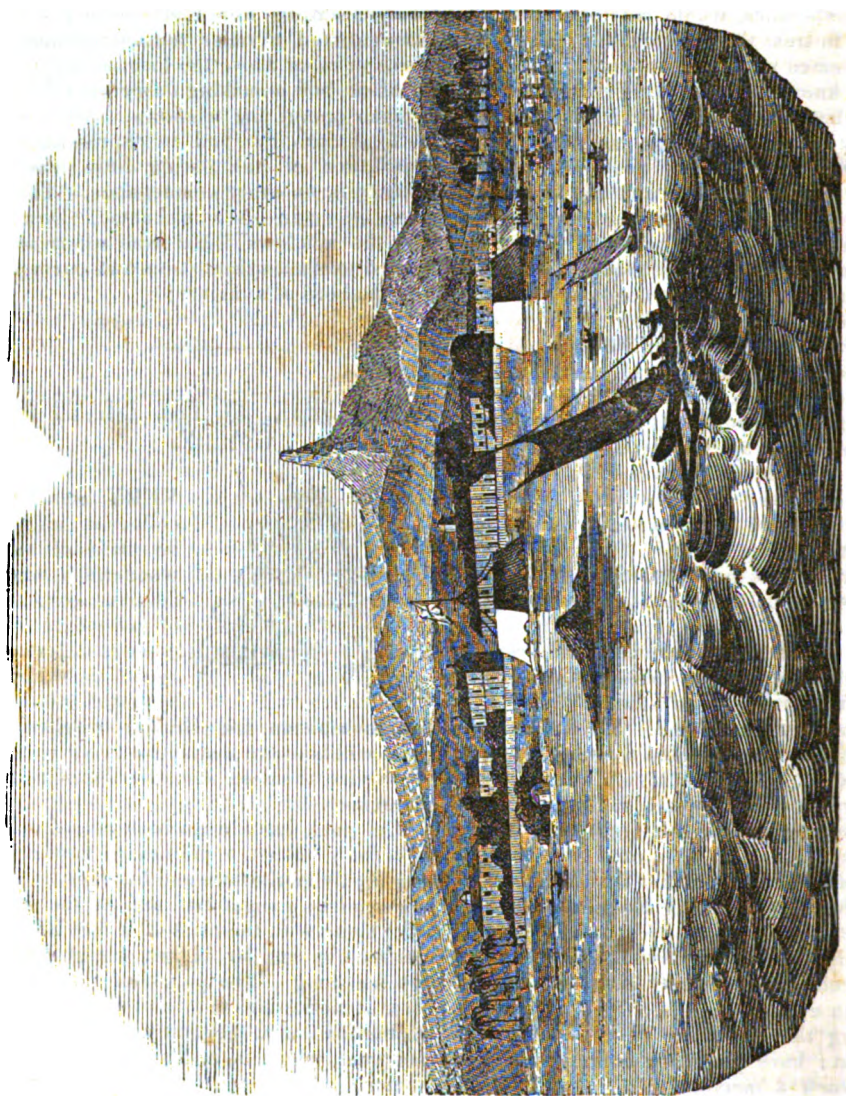


VERY amusing collection might be made of the wonderful and fabulous accounts of this mountain, given at different ages of the world, by pagan, Chris-

tian, mussulman, and Hindoo travellers; but it will be more instructive to our readers to give them an accurate description of the spot.

The peak has always been considered as a holy mount, a pilgrimage to which was highly meritorious and beneficial. It is sharp like a sugar-loaf, and on the top a flat stone with the print of a foot like a man's on it, but far bigger, being about two feet long. The people of this land count it meritorious to go and worship this impression; and generally about their new year, which is in March, they, men, women, and children, go up this vast and high mountain to worship.

Its narrow apex, which is only twenty-three paces long by eighteen broad, is surrounded by a wall, in which there are two distinct openings to admit pilgrims, corresponding to the two tracks by which alone the mountain can be ascended. The



View of Adam's Peak.

elevation of this apex is 6,800 feet above the level of the sea; the granitic peak or cone resting upon a very high mountain belonging to the chain which forms the rampart of the upper country. Nearly in the centre of the enclosed area is a large rock, one side of which is shelving, and can be easily ascended. On the top of this mass, there stands a small square wooden shed, fastened to the rock, as also to the outer walls, by means of heavy chains. This security is necessary to prevent the edifice being hurled from its narrow base by the violence of the winds. The roof and posts of this little building, which is used to cover the *Sri Pade*, or holy foot-mark, was adorned with flowers and artificial figures made of party-colored cloth. The impression in the rock is found to have been formed in part by the chisel, and in part by elevating its outer border with hard mortar: all the elevations which mark the spaces between the toes of the foot have been made of lime and sand. The impression, which is five feet and a half long, two feet and a half broad, and from one and a half to two inches deep, is encircled by a border of gilded copper in which are set a few valueless gems. According to the books respecting Buddhoo, it appears that he stepped from the top of the peak to the kingdom of Siam. The Buddhists profess to believe that the impression is a mark made by the last foot of Buddhoo which left Ceylon. We believe it was the Arabs, who traded here in very early ages, that first changed the hero of the tale, and gave the foot-mark to Adam, our first father.

ALPHABETICAL WRITING.



It is evident that the first and most obvious mode by which thought can be expressed and conveyed to the eye, is by the representation of actual objects. Hence the species of writing which the learned have termed *ideographic*, that is, in which knowl-

edge is conveyed, first, by representations of the objects of thought; secondly, by symbols. The origin of designing is coeval with that of mankind; and men early availed themselves of this art to make their thoughts visible. To make it be understood, for example, that one man killed another, they drew the figure of a dead man stretched on the ground, and of another standing by him upright, with some deadly weapon in his hand. To let it be known that some one had arrived by sea, they drew the figure of a man disembarking from a ship, and so on. This kind of writing, if we may so employ the word, was very early used in Egypt, and most probably, also, in most of the ancient nations.

In Greek, the word *graphein* signifies indifferently either to write or to paint. In Mexico, when the Spaniards landed, the inhabitants conveyed intelligence of the event to Montezuma by sending him a large cloth, on which they carefully painted what they had seen. It is unnecessary to insist on the difficulty and inconvenience of this method of writing; and to lessen these, recourse was had to the symbolic or emblematic variety of ideographic writing. In this method abbreviations or characteristic parts were introduced instead of the entire object. Thus, the ancient Egyptians are said to have represented a siege by a scaling-ladder; a battle, by two hands holding a buckler and a bow, &c. Abstract ideas were, also, represented by symbols, or sensible objects, supposed to have a certain analogy to them: as, ingratitude by a viper, providence by an eye, the head of a hawk, &c.

From ideographic was derived syllabic writing. It must have been early remarked that the sounds formed by the voice in speaking are articulate and well-defined: and the idea occurred of endeavoring to represent such sounds by appropriate signs. Thus the word *republic*, in the writing of which we use eight letters, would be written with three syllabic characters. The President de Goguet suspects that originally all the Asiatic nations, known to the ancients under the names of Syrians and Assyrians, used the syllabic mode of writing. We may, he thinks, discern the vestiges of this in an ancient tradition, which ascribes the invention of writing to the

Syrians ; but acknowledges that the Phœnicians improved, made it more simple, and brought the characters to perfection. But this mode of writing, though a vast improvement on what is purely ideographic, is still very imperfect and cumbersome. The vast number of characters required in it overburdens the memory, and occasions the greatest confusion. The existing language of the Chinese, which is partly ideographic and partly syllabic, is an example of this. In it there are a certain number of elementary signs or keys (two hundred and fourteen), which are strictly hieroglyphic or symbolical ; that is, they are abridged representations of visible objects. From these two hundred and fourteen elements all the characters of the language (80,000 it is said) are formed by varying and combining their figures ; every compound character representing one or more syllables having a distinct meaning.

The defects incident to ideographic and syllabic writing being thus obvious, ingenious individuals would early endeavor to find out some simple and precise method of communicating their ideas. And at length the method of alphabetic writing, the greatest of all inventions made by man, and which has been the great instrument of his civilization, was introduced and perfected. In this method syllables are decomposed into their elements : and the few simple sounds emitted by the voice being represented each by its appropriate mark or letter, syllables and words are formed by their combination ; the latter serving not only to describe external objects, but to depict the workings of the mind, and every shade and variety of thought.

Before entering into the much-disputed question respecting the origin of this mode of writing, it is necessary to indicate the new light thrown upon the subject by the recent discoveries of Dr. Young, and more especially of M. Champollion, as to the phonetic writing of the Egyptians. We have already seen that the hieroglyphical characters of that people denoted, in the first place, *objects* either of sense or thought ; that is, they were ideographic. But, according to the new theory, they came in the course of time to denote sounds ; and those not syllabic mere-

ly, but alphabetical. For example, the Egyptian word *Ahom* signified an eagle ; therefore, stood for the letter A, with which that word begins.—B was represented by a censer (*Berbe*). R sometimes by a mouth (*Ro*), sometimes by a tear (*Rimé*). According to the views of these recent discoverers, a great proportion of the inscriptions on Egyptian monuments and papyri are partly ideographic, partly alphabetical ; i. e. some characters represent objects or ideas ; and these are intermingled with others which merely stand for letters. Dr. Young, who first conceived the notion of the phonetic alphabet, imagined that it was only employed when foreign words or names (as those of Greek kings), were introduced. M. Champollion carried the discovery further, and applied it to the deciphering of words and names in the language of the country. The name of the ancient king *Sabaco*, among others, being found by this mode of interpretation, would appear to show that the phonetic writing was used as early as 700 years B. C. It is not within our present province to discuss the question, upon what ground of probability this theory rests. But if a complete phonetic alphabet should be discovered, in the language of that country in which the earliest germs of knowledge and civilization seem to have been developed, it is probable that we shall have made a considerable step toward tracing the origin of pure alphabetical writing in other languages. As it is, although various attempts have been made to show the symbolical origin of the letters in the most ancient alphabets, it can not be said that any very satisfactory result has been obtained. And from the total want of all recorded knowledge concerning the invention of alphabetical writing, and the difficulty of accounting for it on any known principle of mental association, the hypothesis of divine revelation has obtained considerable currency ; but it need hardly be observed, how ill such a doctrine agrees with all that we know by analogy of the dealings of Providence with man.

It is a common fault never to be satisfied with our fortune, nor dissatisfied with our understanding.

ROTTERDAM.



ROTTERDAM is a seaport town, situated on the north bank of the Meuse, which is there about a mile in width; it is about twenty miles from its mouth; twelve miles from the Hague, and thirty-six from Amsterdam. The breadth of the town is traversed by the Rotte or Roter, a small river which here falls into the Meuse, and gives its name to the city.

About the year 1270, the town was walled, and received the title and privileges of a city. The growth of the town to that importance which it ultimately attained was very gradual, but took place principally during the period in which the united provinces were under the yoke of Spain. The other facts of its history are soon related. Twenty-seven years after the date we have mentioned, the town was taken by the Flemings; and, in 1418, by Waldegrave, lord of Brederode. The town was taken possession of by the French in January, 1794; and it suffered much in the general decline of the Dutch commerce during the long period of war which terminated in 1815. If we add to this that the town sustained much damage in February, 1825, in consequence of an extraordinary rise of the waters of the Meuse, we have exhausted the leading facts in the history of Rotterdam.

Rotterdam owes its prosperity entirely to its advantageous situation as a commercial port. The Meuse forms there one of the safest and most commodious harbors in Europe; and the waters are so deep, that the largest vessels can come and take in or discharge their cargoes at the warehouses of the merchants in the midst of the town, by means of the numerous canals by which, even more than Amsterdam or any other Dutch city, it is intersected. It is owing to this facility that the number of vessels which enter and clear out yearly at Rotterdam has generally equalled, and often exceeded, the number at Amsterdam, notwithstanding the greater wealth and population of the latter port.

Rotterdam is built in the form of a triangle, the largest side of which extends for about a mile and a half along the right bank of the Meuse, which here resembles an arm of the sea. The town, as divided by its numerous canals into insular spots connected by draw-bridges, necessarily resembles Amsterdam. Here also the canals are generally bordered with trees, a circumstance which gives to the seaports of Holland a vernal appearance which is almost peculiar to them. The town is not fortified, but it is surrounded by a moat, and entered by six gates, two of which are toward the water. The streets of the town are in general, straight, and long, but narrow. Several of them are so very similar, that a stranger has much difficulty in recognising any distinction. The foot pavement usually consists of a line of bricks. The long and stately row of houses facing the Meuse, and called, from its row of trees, the "Boomtjes," is the finest part of the town, whether we regard its buildings or the pleasant prospect over the Meuse. Next to the Boomtjes, the quay of the Haring Vleit is the most pleasant place in the city. Many of the houses are built of free-stone, which, not being the produce of the country, must have been brought to the spot at a great expense. The celebrated Bayle once resided on this quay—and the spot on which his house stood is still pointed out to strangers. The suburbs of Rotterdam are very pleasant, and afford a very favorable specimen of the Dutch taste in rural scenery. The gardens, upon a level with the water, and divided from it by a high raised road, appear to have been all designed by a mathematician; but still their neatness and luxuriance leave a pleasing impression on the mind. Most of the principal merchants of the town have their country-seats in the suburbs. Upon most of the gates and houses there is a motto indicative of the peace of mind of the owner, or the character of the place; such as the following: "Peace is my garden,"—"Hope and repose,"—"Almost out of town,"—"Look upon those beneath you," (this was inscribed upon a large house that commanded some little cottages), "Very well content," &c. These inscriptions are seldom used but by opulent tradesmen;



Rotterdam, showing the Church of St. Lawrence.

among the higher classes they are considered to be a little tinctured with vulgarity, though they sometimes indulge in them.

The houses of Rotterdam are rather convenient than elegant, the peculiar style of Dutch architecture being more than usually prevalent there. They are of the height of four, five, or six stories, and, in some quarters, the front walls project as they ascend, so as to place the higher part of the building several feet beyond the perpendicular. In many of the houses the ground-floor is not inhabited, but serves, with its gate and arched passage, merely as an entrance to the warehouses behind. In their interior arrangements and furniture, the houses of Rotterdam, and of many other Dutch towns, possess a degree of convenience, lightness, and comfort, which is not often realized on the continent, and is, perhaps, exceeded only in this country. Altogether, no scene can at first be more novel or interesting to a stranger than that which Rotterdam presents; masts of ships enlivened by gay streamers, beautiful stately trees and lofty leaning houses appear mingled, and at one view he sees before him the characteristic features of the country, the city, and the sea.

HISTORY.



HEREVER literature has had an influence on the minds of men, history has been one of the sources from which they have taken the most copious draughts, and by

which they have become so eminently useful. Were we to take a retrospective view of the different literary characters that have flourished from the period of Homer to the present, we should find that to gain an extensive knowledge of history has been one of their chief pursuits, and upon the utility of this department of literature, they have frequently dilated. All

classes of society, the rich and the poor, the noble and ignoble, the learned and unlearned, peruse its varied pages, appreciate its benefits, and justly rank it among the beneficial studies to be pursued by the true seeker of knowledge.

All experience proves the necessity of having at least *some* acquaintance with history, for without it a man can not mingle in the company of the learned, or discuss with any degree of justness, even the common topics of the day. To study history is an interesting task; and he who makes a diligent search into the past knows this to be a truth worthy of approbation. The student, after pondering over Latin and Greek, and learning the science of mathematics all the day long, finds enjoyment and rest to his mind in reading over in the night watches, the scenes of former times. The philosopher with eager attention, scans every page. On the one hand, he discovers the weakness and depravity of the human heart, and, on the other, man's true intellectual character; he is also taught those precepts and doctrines which support his opinions and contribute to his advancement. The orator seeks time to view the amazing revelations of history. There he meets with examples worthy of imitation and admiration; their lives, actions, and productions, he examines with unwearied diligence, for, by this means, he forms a just estimate of an orator, and perceives what he must do to gain an ever-enduring reputation among men. The legislator reviews the historic page with pleasurable interest; it shows him in what manner the governments and laws of different countries have acted upon human society, and under what circumstances thrones have been demolished, and kingdoms desolated. It explains those means by which nations enjoying the rich blessings of affluence and prosperity, have suddenly been hurled into ruin. It assists him in devising laws which will have a tendency to moralize the community and advance it in power and intelligence. The military chieftain takes delight in surveying the manners and discipline of those renowned warriors who grace the annals of the past. It is by them he judges his own rules and methods, and by comparing them he culls

those which would be the most suitable to his designs. The poet, with watchful eye and anxious heart, searches the history of battles, grand achievements, exploits of reputable heroes, and the writings and personal qualities of distinguished bards. The secret operations of nature are thus openly revealed, and subjects of careful meditation are amply afforded him. Thus we might go on to show the usefulness of history to the sculptor, and all professions and gradations in human life; but thus much is sufficient.

"History," as a modern writer correctly remarks, "is calculated to enlighten the judgment upon those subjects which have a direct bearing, not only upon individual utility and comfort, but also on the welfare of community at large.

"It leads to a knowledge of man in his social relations, and speaks with a warning voice to the oppressor, and infuses consolation and courage into the oppressed. Upon the high principle of religious motives, virtue has been roused to exertion, or has been strengthened to the endurance of remediless wrong by a belief in a future state." It directs man to the accurate principles on which to establish society, and instructs him to avoid the gross opinions which have been advanced for the sole purpose of corrupting and demoralizing the human race, and places him in the virtuous path that will guide to fortune, power and fame. It exhibits the secret springs of all human governments, and evinces the proper, firm foundation on which to erect a *governmental* fabric that will endure the raging scourges of time. It teaches the instability of human greatness, the changes that have controlled the happiness of man. Men have been raised to importance, and to be the rulers of mighty nations, and in the midst of all the honors issuing from such a source have suddenly sank into oblivion and utter forgetfulness. It discloses the many fascinating habitments which vice has assumed, and by means of which the world has been deluged with crime, and covered with total darkness. It speaks in soul-thrilling accents to shun all the temptations and blandishments of sin, and direct the mind to the contemplation of a nobler and more enchanting theme, the Deity—the

rewarder of good, and the punisher of evil. Christianity, the beacon light of modern history, is fast illuminating the pathway of man, and guiding immortal mind to the acme of glory and perfection to which its Creator has destined it.

THE HEART.



HE heart has an appropriate sensibility, by which it is held united in the closest connexion and sympathy with the other vital organs; so that it participates in all

the changes of the general system of the body.

But connected with the heart, and depending on its peculiar and extensive apparatus is what demands our attention; and this is the organ of breathing: a part known obviously as the instrument of speech, but which proves to be more. The organ of breathing, in its association with the heart, is the instrument of expression, and is the part of the frame, by the action of which the emotions are developed and made visible to us. Certain strong feelings of the mind produce a disturbed condition of the heart; and through that corporeal influence, directly from the heart, indirectly from the mind, the extensive apparatus constituting the organ of breathing is put in motion, and gives us the outward signs which we call expression. The man was wrong who found fault with nature for not placing a window before the heart, in order to render visible human thoughts and intentions. There is, in truth, provision made in the countenance and outward bearing for such discoveries.

One, ignorant of the grounds on which these opinions are founded, has said, "Every strong emotion is directed toward the heart: the heart experiences various kinds of sensation, pleasant or unpleasant, over which it has no control; and thence the agitated spirits are diffused over the body." The fact is certainly so, although the language be figurative. How are these spirits diffused, and what are their effects?

We find that the influence of the heart upon the extended organ of respiration has sway at so early a period of our existence, that we must acknowledge that the operation or play of the instrument of expression precedes the mental emotions with which they are to be joined, accompanies them in their first dawn, strengthens them, and directs them. So that it is not, perhaps, too much to conclude that, from these organs moving in sympathy with the mind, the same uniformity is produced among men, in their internal feelings, emotions, or passions, as there exists in their ideas of external nature from the uniform operations of the organs of sense.

Let us place examples before us, and then try whether the received doctrines of the passions will furnish us with an explanation of the phenomena, or whether we must go deeper, and seek the assistance of anatomy.

In the expression of the passions, there is a compound influence in operation. Let us contemplate the appearance of terror. We can readily conceive why a man stands with eyes intently fixed on the object of his fears, the eyebrows elevated to the utmost, and the eye largely uncovered; or why, with hesitating and bewildered steps, his eyes are rapidly and wildly in search of something. In this, we only perceive the intent application of his mind to the object of his apprehensions—its direct influence on the outward organ. But observe him further; there is a spasm in his breast, he can not breathe freely, the chest is elevated, the muscles of the neck and shoulders are in action, his breathing is short and rapid, there is a gasping and convulsive motion of his lips, a tremor on his hollow cheek, a gulping and catching of his throat; and why does his heart knock at his ribs, while yet there is no force of circulation?—for his lips and cheeks are ashy pale.

So in grief, if we attend to the same class of phenomena, we shall be able to draw an exact picture. Let us imagine to ourselves the overwhelming influence of grief on women. The object in her mind has absorbed all the powers of the frame, the body is no more regarded, the spirits have left it, it reclines, and the limbs gravitate; they are nerveless and

relaxed, and comes at intervals the long-drawn sigh?—what causes the swelling and quivering of the lips, and the deadly paleness of the face?—or why is the hand so pale and earthy cold?—and why, at intervals, as the agony returns, does the convulsion spread over the frame like a paroxysm of suffocation?

It must, be acknowledged, when we come to arrange these phenomena, these outward signs of the passions, that they can not proceed from the direct influence of the mind alone. However strange it may sound to unaccustomed ears, it is to the heart and lungs, and all the extended instrument of breathing, that we are to trace these effects.

Over such motions of the body the mind has unequal control. By a strong effort the outward tokens may be restrained, at least in regard to the general bearing of the body; but who, while suffering can restrain the natural fulness of his features, or the healthful color of his cheek, the unembarrassed respiration and clearness of the natural voice? The villain may command his voice, and mask his purpose with light and libertine words, or carry an habitual sneer of contempt of all softer passions; but his unnatural paleness, and the sinking of his features, will betray that he suffers. Clarence says to his murderers:—

"How deadly dost thou speak!
Your eyes do menace me. Why look you pale?"

But the just feelings of mankind demand respect; men will not have the violence of grief obtruded on them. To preserve the dignity of his character, the actor must permit those uncontrollable signs of suffering alone to escape, which betray how much he feels, and how much he restrains.

THE SABBATH.—The people of nearly all nations have a special regard for one day in each week. Christians observe Sunday; the Greeks, Monday; the Persians, Tuesday; the Assyrians, Wednesday; the Egyptians, Thursday; the Turks, Friday, and the Jews, Saturday. Thus every day in the week is a sabbath in some country, and it would be well for all to remember that "it is right to do good on the sabbath-day."

THE LYNX.



HE lynxes form a small section in the very extensive genus *felis*, or cat tribe of animals, in which they are principally distinguished by the length of the fur, the shortness of the tail, and by the brushness of hair with which their ears are furnished.

The lynx is about the size of a moderately large dog, measuring about two feet and a half from the head to the commencement of the tail, which is about six inches long, the eyes, which are proverbially piercing, are of a pale yellow color. The long and soft fur is generally of a bright red color, marked on the back and limbs with blackish-brown spots; three lines of black spots on the cheeks join a large black oblique band on each side of the neck under the ear: the fur of these parts is longer than elsewhere, and forms a kind of laternal beard. The forehead and top of the head are dotted with black; and on the top of the neck there are four lines of the same color, the middlemost of which is broken and interrupted. The dark spots form two oblique bands on the shoulders, and transverse bands on the fore-legs.

The lynx was formerly spread over the Old World. It was common in France, and has only disappeared from Germany at a comparatively recent period. It is still found in the north of Europe, and even in Portugal and Spain. It is very common in the forests of northern Asia, and in the Caucasus. That which inhabits the more southern parts of Asia, and is found in Africa, is a rather distinct variety called *caracal*, a contraction of the Turkish name *kara*, black, and *kulack*, ear. It is chiefly distinguished by its uniform vinous red color, by its ears, which are black both without and within, and by a longer tail than any other lynx possesses. America is known to have two, or perhaps three varieties of the lynx. The first is that which, after Buffon, is called the Canada lynx. Its color is gray, its tail is longer than that of the common lynx, and

the hairs on the ears are shorter. Some individuals have the fur so thick and long, especially on the paws, that they have a very different appearance from the European lynx; the identity of which with this species is asserted by some naturalists and disputed by others. It is found in great abundance in the districts about Hudson's bay, whence from 7,000 to 9,000 skins are yearly exported. It is a timid creature, and makes but slight resistance when brought to bay by the hunter; for though, like the cat, it spits and erects the hair on its back, it is easily destroyed with a slender stick. The other variety (*felis rufa*) which is found in the United States, is smaller than the one just mentioned. It has the form and distribution of spots of the European variety; but the ground color is gray; its spots are more numerous, deeper on the back, and paler on the sides and limbs.

The howl of the common lynx has a considerable resemblance to that of the wolf. When assailed, it is by no means passive. When attacked by a dog, it lies down on its back, and strikes so desperately with its claws, that it frequently compels the assailant to withdraw.

THE APPEARANCES OF DESIGN IN THE UNIVERSE.



Every part of the universe with which we are acquainted exhibits evident marks of design, we must of necessity infer, that it sprang from a Wise and Intelligent Cause. The inference is obvious and undeniable. It is, indeed, principally upon this argument, that our belief in the existence of God is founded; and as it has been often placed in a false light by atheists and skeptics, we shall endeavor to vindicate its justness from the objections of some able, and chiefly of some late opponents.

In order to speak distinctly upon this

Lynx.



subject, it is necessary to have a precise and accurate notion of what is meant by design, because some persons seem not to have given sufficient attention to this matter, and have involved themselves in perplexity.

In common life we understand distinctly what is meant by design. We say that a man acts with design and foresight, when his actions tend to bring about some end, and were performed by him with this view. If a man propose to make a clock, and adjusts wheels and weights to one another, so that a motion is produced by means of which the hours are pointed out, we say that he acts with design, and we say that the piece of work which is produced manifests contrivance. Whenever anything is properly adapted for producing an end, or answering a purpose, we say it is done with design. It is in this sense that the word design has been employed in stating this argument. It has been shown, that important ends are served by means of the bodies of which the material world consists, and that their revolutions are directed to the accomplishment of certain valuable purposes. It has also been shown, that the fabric and limbs of the human body, and the faculties of the human mind, are well fitted for those offices which they perform. In all these things there are undeniable marks of wisdom and intention.

When there appears design or contrivance in anything, the question naturally occurs, from what did it proceed? and the obvious answer is, that it proceeded from a designing cause. In this case there is no occasion for any chain of reasoning. The judgment is formed intuitively, and without any intermediate step. That every effect must have a cause, is an axiom manifest to every person; and it seems to be equally evident, that every effect that exhibits marks of design, must have proceeded from a designing cause. Whatever is well adapted for answering an end, must have been adapted by its author and contriver to answer that purpose. No judgments we can form appear to be more self-evident than these; and accordingly they seem to have been formed by the whole of mankind, with respect to every subject to which they are applicable.

It may then be laid down as a first principle, founded on the constitution of our minds, and standing in need of no proof whatever, "that design, wherever it is observed, naturally, and therefore necessarily, suggests to us the notion of a cause." The one conception is always connected with the other. We apply this principle in all the common affairs of life. If we behold a ship well built, completely rigged, and properly accommodated for containing a cargo of goods, or for lodging a number of passengers during a long voyage, we never hesitate in pronouncing, that it must have been the workmanship of a skilful carpenter. If we look at a palace adorned with all the elegant ornaments of architecture, and conveniently disposed for the accommodation of its inhabitants, and for exhibiting to spectators their splendor and magnificence, we can not entertain the slightest doubt of its having been contrived by an architect, and executed by the hands of artists, adequate to such a noble piece of workmanship. If we were going through a desert, and saw a wretched hovel erected, though we observed no vestige of living creatures near it, we would immediately ascribe it to intelligent beings, and conclude, without further reflection, that man had once been there. Aristippus, the philosopher, was shipwrecked upon an island; and he, along with his fellow-sufferers, were walking on the shore, deploring their miserable fate, and not doubting but they would soon be attacked and destroyed by barbarians, or torn to pieces by wild beasts. While they were in this situation, the philosopher made a discovery which dispelled his own fears; and by means of which he was enabled to rouse the drooping spirits of his companions. He perceived certain mathematical figures scratched upon the sand of the seashore. The judgment which he formed was certain, and it was immediate. "Let us take courage, my friends," said he, "for I discern the vestiges of civilized men." He never imagined that regular figures, adapted to the demonstration of abstract truths, could have been accidentally formed by the foot of a sea-fowl; nor even that they could have been drawn by the hand of savages. In these suppositions there would have been no

probability. He instantaneously judged that they must have been constructed by men who had made progress in knowledge and mental improvement; and who, of consequence, must have attained to gentle and polished manners. If we hear a tune well played, we never imagine that the sound is produced without the efforts of a musician; and if we read an excellent poem, we are immediately convinced that it is the work of a good poet. We never imagine that letters accidentally thrown down, could form themselves into an *Iliad* or an *Eneid*. We do not even imagine that a person of small abilities could have arranged words, or contrived incidents, so as to have formed works of such distinguished merit. We are naturally led to assign a cause adequate to the effect, and to ascribe poems of such beauty and grandeur to minds of a superior order. In our connexions with men, in the same manner, we observe their words and their actions. We consider these as effects proceeding from an internal cause. We judge of the cause from the effects which we observe; and we conclude, that he who acts and speaks with prudence and discernment, must possess faculties corresponding to his behavior.

All these judgments proceed from our constitution. We are so made that we naturally form them, just in the same manner as we pronounce snow to be white; or as we infer the existence of a substance from discerning its qualities. The whole of mankind form similar judgments, and they do it intuitively. They use no argument on such subjects, and they can use none. They employ no intermediate steps, as in a chain of reasoning; and do not arrive at their conclusion by adjusting premises to one another.

If we judge in this manner in the ordinary transactions of life, it is surely to be expected that we should judge in the same manner with respect to the design and contrivance discernible in the fabric of the universe. If a mathematical figure be scratched upon the sand, we instantaneously ascribe it to a designing cause, and acknowledge that he who formed it was a man acquainted with certain abstract truths. If we observe a building or an elegant contrivance, we ascribe them to

an artist. If we see well-directed conduct, we conclude that he who performed it is a prudent agent. Can we then behold the regularity and order of the universe, the subserviency of every part to the rest, the excellent adjustment of means to ends, and the invariable succession of revolutions, without pronouncing immediately that there must be an intelligent cause that produced them? It is impossible to behold the planetary system, to consider how nicely its parts are fitted to one another, how regularly its motions are directed, and how beneficial every part of it is to living creatures, without declaring that it is the workmanship of a wise being. The bodies of animals are infinitely better constructed, and are also much more complex, than the best machine of human contrivance; and if no person ever thought a watch was formed without intention, can any person imagine that animal bodies were produced without an artist?

If we take into consideration the provision that is made for the support of animal life, the instinct with which every creature is furnished, its appetites and its passions adapted to its manner of life, we observe still more and more reason for drawing the same conclusion. The faculties which man possesses, the powers of understanding and of action, and his capacity for discerning what is fair and beautiful, and of prosecuting what is honorable and proper, must obtain from every candid mind an acknowledgment that this lord of the lower world must have been formed by the hand of wonderful intelligence. "He that planted the ear, shall he not hear? He that formed the eye, shall he not see? He that teacheth man knowledge, shall he not know?" The judgment in this case is as natural and necessary as in any other whatever. It flows from a principle in our constitution, and it has been formed in all ages.

These judgments which we form concerning causes, from observing their effects, must be founded upon an original principle in our constitution. They are universal, and yet nobody assigns a reason for them. They are evidently not conclusions from reasoning. It is impossible to point out any intermediate steps by which they are proved, and nobody has

attempted it. No man can give any argument by which it can be shown, that a mathematical figure must be the work of an intelligent being, and could not be the work of a fowl or of a quadruped. We judge indeed in this manner, but we can assign no reason for our judgment, any more than we can assign any reason why we judge that two and two make four. Neither did we learn to judge in this manner by experience. From experience we can acquire knowledge only concerning contingent truth or matters of fact, which may be, or may not be, without any absurdity. We can never learn from experience any knowledge concerning necessary truths which must be, and which it involves an absurdity to suppose not to be. We may learn from experience that bodies gravitate. This is not a necessary truth; it is only contingent, and depends on the will of the Creator; and if he had pleased, bodies might had opposite properties, or might not have existed. But we can not learn from experience that the whole is equal to all its parts. This is a necessary truth, and necessarily flows from the notions we have of a whole and of its parts. It must be true; and it is impossible, and involves absurdity, to think otherwise. Now, our judgments concerning the connexion of effects and causes, are judgments concerning necessary truths. We do not judge that the connexion *may* take place, but that it *must* take place. These judgments, therefore, are of such a nature, as experience can not suggest.

Some persons, unwilling to admit that the world sprung from a designing cause, have pretended that everything sprung from *chance*, or from absolute *necessity*. That the world arose from accident, was strongly urged by the ancient Epicureans; and that it sprung from necessity, or absolute and undirected fate, has been insisted upon by some speculative atheists and skeptics, both in ancient and modern times. It is, however, to be remarked, that these are only forms of expression, without any clear and distinct meaning. Chance and absolute necessity are words expressing certain abstract notions; and neither the notions, nor the terms that denote them, can possibly be the causes of anything whatever. They are not ac-

tive beings, capable of accomplishing any end. In common language we attribute many things to chance. If a die be thrown, we say it depends upon chance what side may turn up; and, if we draw a prize in a lottery, we ascribe our success to chance. We do not, however, mean that these effects were produced by no cause, but only that we are ignorant of the cause that produced them. There are mechanical causes, which determine what side of a die will cast up, as certainly as anything else; and if we could adjust perfectly the degree of force with which it is thrown, and particular direction, together with the nature of the surface on which it passes, we could tell precisely what side would appear. This, however, we can not do; and because the event depends on circumstances which we can not foresee, we ascribe it to a cause of which we are ignorant; and to such uncertain and undetermined causes, we give the name of chance; not meaning that there is no cause, but that we can not ascertain it.

Again, when all things are ascribed to necessity, if those who use the term have any meaning at all, they can not mean that they sprung from no cause; they must only mean that the cause, whatever it was, acted necessarily, and not from choice. They must conceive the first cause to have been actuated by some involuntary force, as a machine is moved by weights and springs, so that the effect must necessarily be produced; and can not mean that there was no cause. If we ascribe, then, everything to chance, we do not exclude a cause; we only say we do not know what that cause is. If we ascribe everything to necessity, we also admit a cause, though a different one from what is admitted by those who acknowledge design. The only question then is, whether the cause admitted to be a designing cause or not?

That the universe must have proceeded from a *designing* cause, and could not possibly have proceeded from a cause without design and intelligence, by whatever name it may be denominated, whether it be called chance, or necessity, or fate, is exceedingly obvious. Nothing beautiful, regular, and orderly, ever proceeded, or can pro-

ceed, from an undesigning cause. Suppose matter to have existed originally of itself, and to have been endued with motion from eternity; and suppose that motion to have been continued without diminution; there is no doubt but these materials, continually agitated, would, in the course of millions of ages, have assumed various forms; but there is no probability that ever these forms would have been regular, and much less that there should be regularity in all their revolutions, mutual connexions, and dependencies. Did ever chance form a machine so regular as a watch? Throw the different wheels, and springs, and pinions, of which a watch is composed, into one vessel, and keep the whole in motion for ages, and after all, neither the whole, nor any part of them, will ever be properly placed and adjusted. Take a case that has often been put in handling this argument. Suppose a triangular prism, with three unequal sides, and a scabbard perfectly adapted to it, to be both set in motion through empty space; grant both of them the power of altering their motions, and of flying up and down in every possible direction, it is infinity to one that they will never meet. Supposing they did meet, it is still infinity to one that they do not meet in that one particular direction in which the prism will enter its scabbard. If chance, then, can not effectuate those simple adjustments, to which the design of a child is equal, how can it be imagined that it should adjust the innumerable parts and revolutions in the universe? There is not the slightest shadow of probability to justify such a supposition. Even though chance should sometimes have stumbled upon a regular form, after a variety of trials—in the way that Epicurus imagined men, and animals, and vegetables, to have been fashioned—these forms would again have been immediately destroyed, in the same manner that the monstrous appearances that had existed before them, in infinite multitudes, were destroyed, in consequence of the motion and changes of situation which, upon that supposition, are always going on among the particles of matter. If chance never could arrange unorganized matter into those beautiful and regular forms with which we see it invested, could it, or necessity, or any

blind cause, by whatever name it may be called, ever produce a being endued with life, sensation, intelligence, and the power of voluntary action? Can that which has itself no design or understanding, produce a wise and intelligent mind? The supposition is absurd. It is supposing an effect to be produced by an inadequate cause; which is precisely the same thing as to suppose it produced by no cause at all. It is strange that such an opinion should have ever been embraced by philosophers, the folly of which is manifest even to a child. An infant, if its bells on its rattle be taken away, never dreams that they were taken away by nobody, but immediately judges that they were removed by some person or other. Even a dog, if a stone be thrown at him, never imagines that the pain he feels arose without a cause. He either flies from the place, that he may be exposed to no further sufferings, or he turns with resentment to defend himself. If an inhabitant of Terra del Fuego, or Lapland, who had never seen an army, nor knew the use of firearms, were brought to see a regiment reviewed, would he imagine that all their orderly motions and evolutions were the effects of blind chance? Would he not immediately perceive that they arose from design and premeditation? The motions of a single human body are much more regular, and more various, than those of a large body of soldiers upon a field-day. Why then imagine that these motions are carried on without design? What then shall we say of the regularity observable in the whole human race, in inferior animals, in plants, in unorganized matter, and through the whole extent of the universe? Or, what shall we say of the intelligence of that man, who seriously believes that the whole is produced without a designing cause?

LIFE A JOURNEY.—Consider heaven as your home; yourself as on a journey to it; the affliction you meet with as a course of discipline to prepare you for it; and the treasures you may possess as given to defray your expenses on the way, and to enable you to do something for those who do not enjoy your blessings.

THE GNU.



HE gnu appears as if it were a compound of the horse, ox, and stag, for it partakes of the characters of all three, and not the least of those of the horse; in fact, the neck, body, and tail, are those of a well-formed small horse; the former is furnished with a mane, and the tail is long and flowing. The limbs are slender, vigorous, well-knit, and resemble those of a stag, while the head and horns remind us of the buffalo. The eyes are lowering, and expressive of great ferocity; the horns, which are common to both sexes, closely resemble those of the savage cape buffalo, except that they are smaller: they arise from a basal mass of horn, expanding like a helmet over the forehead, whence they sweep downward between the eyes, and then suddenly turn upward, and somewhat outward, ending in a sharp point. Their situation is altogether such as to overshadow the eyes, producing an aspect of suspicion and vindictiveness. The chaffron is furnished with a mane-like tuft of bristly hairs; and the chin and throat are covered with hairs of a similar character, also forming a shaggy beard, while a full mane flows down from the under-side of the neck, and from between the fore-limbs; that along the upper ridge of the neck being thick and upright. The head is heavy; and the muzzle is expanded into a thick muscular valve, or flap, which shuts down like a lid, so as to close the aperture of the nostrils, which are thus capable of being opened or closed at will. The lachrymal sinus consists of a small gland below the angle of each eye, and concealed in a tuft of long hair, by which it is entirely surrounded.

The gnu is a native of the wild karroos of South Africa, and the hilly districts, where it roams sometimes singly, but mostly in large herds, which migrate according to the season. The extent of its range in the interior regions is not known. As far, however, as travellers have penetrated, herds have been met and chased; for its flesh is prized as food both by the

natives and the colonists. They are, however, extremely wild, and not to be approached without difficulty. On the first alarm, away scours the troop, not in a tumultuous mass, but in single file, following a leader; and as they are seen galloping in the distance over the plain, they so much resemble zebras, or quaggas—tenants of the same wilds—that were it not for the difference of color, they might easily be mistaken for those animals. The general color of the gnu is deep umber-brown, ranging upon black; the tail and mane are gray, the latter, indeed, nearly white. Their speed, as might be expected from the vigor and compactness of their body and limbs, is very great. When first alarmed, however, they do not exert it, but plunge about, flinging out their heels, butting at various objects, and exhibiting emotions of violent fury. It is seldom that they venture upon an attack unless hard pressed, or wounded, when they defend themselves with desperation: dropping on their knees, they dart forward upon their rash enemy with extraordinary force and impetuosity, and unless he be cool and prepared, he can not escape his fate.

That the gnu is sometimes seen single appears from the account of Sparrman, who observes, "On the 24th I was induced to stay longer a little longer on this spot, by the hopes of shooting a gnu which had been seen ranging by itself about this part of the country. *T'Gnu* is the Hottentot name for a singular animal which, with respect to its form, is between the horse and the ox. The size of it is about that of a common galloper, the length of it being somewhat about five feet, and the height of it rather more than four. The gnu then wandering in these parts was probably an old buck, which did not care to keep company any longer with the herd to which it belonged, or had been accidentally separated from it. As this that was seen here kept upon the open plains, and we could not steal upon it by creeping towards it from among the bushes, I endeavored to overtake it on horseback; and, indeed, at first I got almost within gunshot of the animal, when it showed its vicious disposition in making various curves and plunges, flinging out behind with



Herd of Gnus.

one or both legs, and butting against the mole-hills with its horns ; but immediately upon this, it fled with considerable velocity in a direct line over the plain as far as the eye could discern it, and I can not help thinking that this was one that was become furious, as the other gnus I have chased since, would frequently stop to look back at their pursuers, as soon as they had gained ground of them in any considerable degree. What contributed not a little to this gnu's having escaped me, was that the ground was rocky ; and that an ardent desire for dissecting this animal induced me to push my horse on too fast at first, so that in a little time it was quite out of breath, and all over in a tremor." Indeed, so excessively was the horse fatigued, that Sparrman could not even chase a jackal that was feasting on an elk-antelope shot the day before. At a subsequent period he met with large herds of gnus, and was more successful. Mr. Pringle observed the gnu among the hills at Bavian's river : he informs us that its flesh in all its qualities, has much resemblance to beef. He also asserts, that, like the buffalo and ox, this animal is enraged by the sight of scarlet. "It was one of our amusements to hoist a red handkerchief on a pole, and observe them caper about, lashing their flanks with their long tails, and tearing up the ground with their hoofs, as if they were violently excited and ready to run down upon us ; and then all at once, as we were ready to fire upon them, to see them bound away, and again go prancing round us at a safer distance." This aversion to scarlet we have ourselves noticed in individuals in captivity, and on one occasion, much enraged a gnu by suddenly displaying the scarlet lining of a cloak.

The gnu when taken young may be tamed without much difficulty. Sparrman caught a calf, and as he says, "had likewise previously seen and examined another tame one of the same size which was intended as a present for the governor : it was feared, however, that this as well as the young *hartebeests* which they were endeavoring to bring up tame, would be subject to a kind of furor or madness." Why so we are not informed. Mr. Pringle assures us that the gnu taken young will become as domesticated as the cattle of the

farm, with which it associates, harmlessly going to and returning from pasture ; it appears, however, that few farmers like to domesticate it, as it is liable to a cutaneous eruption which it communicates to the cattle, and which is invariably fatal. In confinement the gnu often becomes ferocious, and is not to be approached without caution ; the females are less dangerous than the males, and more easily manageable.

THE PHILOSOPHY OF MYSTERY.



HE phosphorescence of the marshes, the ignis fatuus, Will-o'-the-Wisp, Jack-o'-the-Lantern, or Friar Rush, and the Corpse Candles, are mere luminous exhalations,

strained into the marvellous by the vulgar, and thus set down as heralds of immortality.

The parhelia, or mock suns, are produced by the reflection of the sun's light on a frozen cloud.

The corona, or halo around the sun, moon, and stars, is easily illustrated by the zone, formed by placing, during a frost, a lighted candle in a cloud of steam or vapor. The Aurora Borealis is *arctic electricity*, and is beautifully imitated by the passage of an electric flash through an exhausted glass cylinder. The rainbow is a combination of *natural prissus*, breaking the light into colors ; and it may be seen in the cloud, or in the spray of the ocean, in the cascade of Niagara, or indeed, in any foaming spray on which the *meridian* sun-beams fall, or even in the dewy grass, lying, as it were, on the ground.

The "Spectre of the Brocken," is a mere shadow of the spectator, or a gigantic scale. The phantom, the "Schatt-terrman," according to vulgar tradition, haunts the lofty range of the Hartz mountains, in Hanover. It is usually observed when the sun's rays are thrown horizontally on their fleecy clouds, or vapor, of highly reflective power, assuming the shape of a gigantic shade on the cloud.

When Franklin set his bells a-ringing

by drawing down the electric fluid from the thunder-cloud, and when Columbus told to the hour the sun's eclipse, can we wonder that the Indians listened as to one endued with preternatural knowledge, or that the other might be thought superhuman? And when the king of Siam was assured that water could be congealed into ice, on which the sounding skate could glide, can we wonder that he smiled in absolute disbelief of such a change, and called the tale a lie? Thus, when the peasants of Cardigan, who were not versed in Pontine architecture, looked on the bridge which the monks had thrown across the torrent of the Monach, they could not believe it a work of human, but of *infernal* hands, and called it the "Devil's Bridge."

The records of antiquity teem with tales of fatal prognostics to heroes, kings, and emperors, whose deaths, indeed, seldom take place without a prophecy. From Aristotle, we learn that the death of Alexander was foretold in a dream of Eudemius, and that of Cæsar by his wife, Calphurnia. The emperor Marius dreamed that he saw Attila's bow broken, and the Hun king died on the same night; and Sylla died on the night succeeding that on which he dreamed of such a fate. Valerius Maximus, records the death of Caius Græchus immediately after a dream of it, by his mother. Caracalla foretold his assassination in a dream. Cyrus dreamed of the exact moment in which he died. The death of Socrates was foretold to him by a lady. The essence of the dream is usually *a want of balance between the representative faculty and the judgment*; being produced, directly or indirectly, by the excitement of a chain of ideas, rational or probable in parts, but rendered in different degrees extravagant, or illusive, by imperfect association. Thus, the ideas of a dream may be considered a species of delirium; for the figures and situations of both are often of the most heterogeneous description, and both are ever illusive, being believed to be realities, and not being subject to the control of our intellect. Yet, if the most absurd dream be *analysed*, its constituent parts may consist either of ideas, in themselves not irrational, or of sensations or incidents, which have been individually felt or witnessed.

Napoleon, when he was marching upon Acre, had a Nile boat which some of his troops destroyed; the boat's name was *L'Italie*; and from this he said, "Italy is lost to France." And so it was.

During the siege of Jerusalem, for seven days, a man paraded round the walls exclaiming, with a solemn voice, "Wo to Jerusalem!" and on the seventh day he added: "Wo to Jerusalem and *myself*!" when at the moment of this anathema, a missile from the enemy destroyed him.

When dark events were overclouding Poland, to Sorvenski, the warrior, a convert to magnetism, it was imparted in a vision that Warsaw should be deluged in blood, and that he should fall in battle. In two years these forebodings were fulfilled.

Oliver Cromwell had reclined on his couch, and extreme fatigue forbade the coming on of sleep. On a sudden his curtains opened, and a gigantic female form imparted to him that he should be the greatest man in England. The puritanical faith and ambition of Cromwell might have raised during the distracted state of the kingdom, something even beyond this; and who may decide if the spectre had whispered "thou shalt be king hereafter," that the protector would have refused the crown, as on the feast of Lupercal, it had been refused by Cæsar.

An officer in the duke of Marlborough's army named Prondergast, mentioned to many of his friends that he should die on a particular day. Upon that day a battle took place with the French, and after it was over, and Prondergast was still alive, his brother officers, while they were yet in the field, jestingly asked him where was his prophecy now. Prondergast gravely replied, "I shall die yet, notwithstanding what you see." Soon afterward there came a shot from a French battery, to which the orders for a cessation of arms had not yet reached, and he was killed upon the spot.

But can these shallow stories be cited as *prophecies*? The links in the chain of causation are evident, and the veriest skeptic can not doubt their sequence, where there was so strong a probability. It is merely by reflecting on the past, and judging the future by analogy. Natural

events of human actions have laws to govern them, and there is seldom foresight without the reflection on these laws. Lord Mansfield, when asked how the French revolution would end, replied, "It is an event without a precedent, and, therefore, without a prophecy."

"In 1811," writes Lord Byron, in a letter to Mr. Murray, "my old school and former fellow-poet, the Irish secretary, told me he saw me in St. James' street. I was then in Turkey. A day or two afterward, he pointed out to his brother a person across the way, and said, 'There is the man I took for Byron.' His brother answered, 'Why it is Byron, and no one else.' I was at this time *seen* to write my name in the palace book. I was then ill of a malaria fever. If I had died, here would have been a ghost story."

A farmer of Teviotdale, riding home in the gloom of the evening, saw, on the wall of a cemetery, a pale form, throwing about her arms, and moving and chattering to the moon. With not a little terror, he spurred his horse, but as he passed the phantom it dropped from its perch, and, like Tam O'Shanter's Nannie, it fixed itself on the croup of his saddle, and clasped him tightly round the waist with arms of icy coldness. He arrived at home, and with a thrill of horror exclaimed, "Take off the ghaist!" and was carried shivering to bed. And what was the phantom? A maniac widow, on her distracted pilgrimage to the grave of her husband, for whom she had mistaken the ill-fated farmer.

The president of a literary club at Plymouth being very ill during its session, the chair, out of respect, was left vacant. While they were sitting, his apparition, in a white dress, glided in and took formal possession of the chair. His face was pale and cadaverous; he bowed in silence to the company; carried his empty glass to his lips, and solemnly retired. They went to his house, and learned that he had just expired! The strange event was kept a profound secret, until the nurse confessed on her death bed that she had fallen asleep, that the patient had stolen out, and, having the pass-key of the garden, had returned to his bed by a short path before the deputation, and had died a few seconds after.

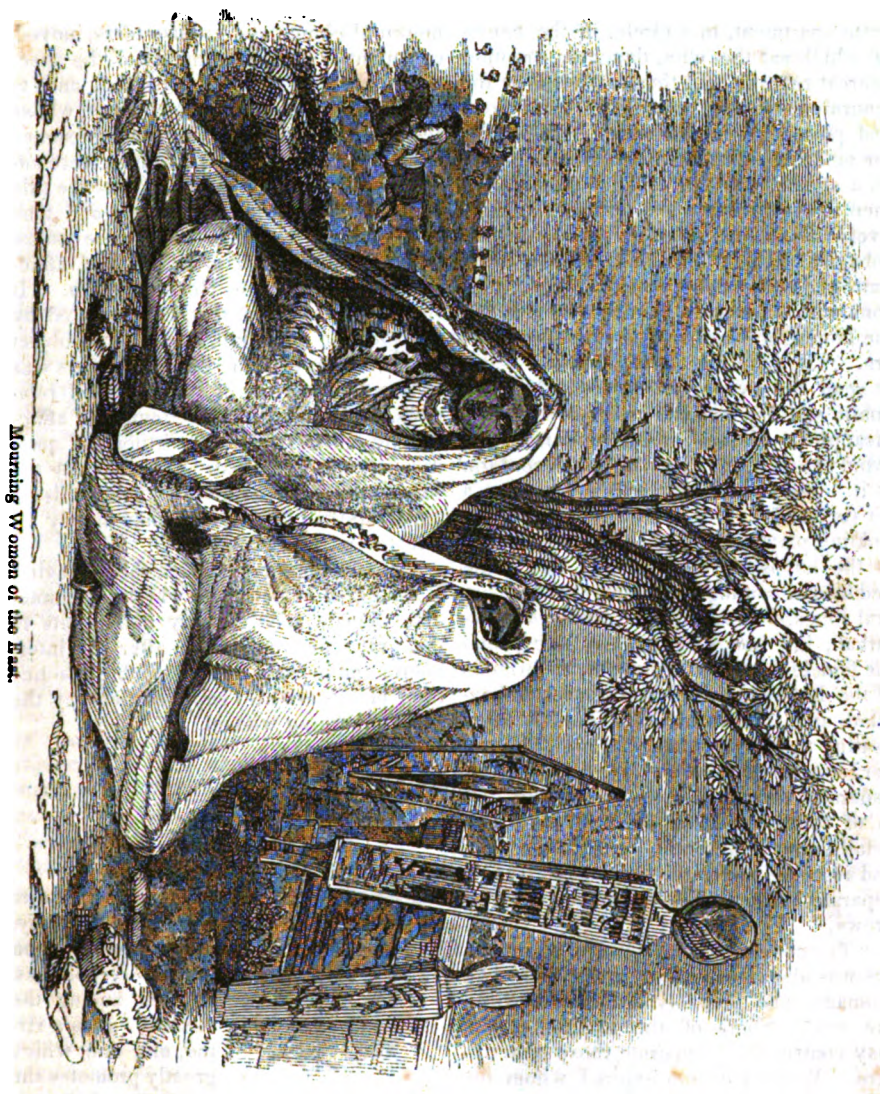
MOURNING WOMEN OF THE EAST.



EW oriental customs appear so strange to the traveller, as the rites and ceremonies performed in eastern countries on the decease of a Moslem. On the occasion of a death in the east, the

women of the family, the mother, wives, sisters, &c., break out into the most violent lamentations, crying out, "O, my master! O, camel of the house! O, my misfortune!" &c., in which they are often joined by the females of the neighborhood, who come to the house of mourning and unite with the inmates in their wailings. But that their grief may be expressed with all the exaggeration possible, there are certain individuals who make it their business to weep and lament for the dead, and who offer their services on all such occasions, "for a consideration;" depending on such exertions for their livelihood. That is to say, in all Moslem cities there are women who may be hired to attend on the corpse, and to aid the mourners in bewailing the death of their friend, which they do with the most violent gesticulations, weeping, shrieking, rending their clothes, and by other means intimating an intensity of sorrow (which it is almost needless to say they can not feel) for the loss their employers have sustained. The practice of hiring public mourning women on such occasions appears to be of great antiquity.

The root of this rather singular though very prevalent custom seems to be, that the Eastern nations require manifestations of strong feeling to be marked, palpable, and exaggerated. Hence their emotions, particularly those of grief, have a most violent and loud expression; and, still unsatisfied, and apprehensive that their own spontaneous manifestations of sorrow, when a death occurred, were inadequate to the occasion, and rendered insufficient honor to the dead, they thought of employing practised women to add their effective and manifest tributes of apparent grief. Thus mourning became an art, which de-



Mourning Women of the East.

volved on women of shrill voices, copious of tears, and skilful in lamenting and praising the dead in mournful songs and eulogies. When a person in a family died, it was customary for the female relatives to seat themselves upon the ground in a separate apartment, in a circle, in the centre of which sat the wife, daughter, or other nearest relative, and thus, assisted by the mourning women, conducted their loud and piercing lamentations. At intervals, the mourning women took the leading part, on a signal from the chief mourner; and then the real mourners remained comparatively silent, but attested their grief by sobs, by beating their faces, tearing their hair, and sometimes wounding their persons with their nails, joining also loud in the lamenting chorus of the hired mourners. The family of the deceased generally send for two or more *Neddábehs* (or public wailing women); but some persons disapprove of this custom, and many, to avoid unnecessary expense, do not conform to it. Each *neddábeh* brings with her a *tár* (or tambourine), which is without the tinkling plates of metal that are attached to the hoops of the common *tár*. The *neddábehs* beating their *társ*, exclaim several times, "Alas for him!" and praise his turban, his handsome person, &c.; and the female relations, domestics, and friends of the deceased (with their tresses dishevelled, and sometimes with rent clothes), beating their own faces, cry in like manner, "Alas for him!" This wailing is generally continued at least an hour. It is of course resumed at intervals. The details vary in different parts of the east, and in some places the musicians form a separate body, as they did among the Hebrews.

"The custom of employing hired mourners was also in use among the Greeks and Romans, who probably borrowed it from the east. Some of the Roman usages may contribute to illustrate those of scripture. When a person expired whom his relatives or friends wished to honor by every external testimony of grief, some mourners were called, who were stationed at the door, and who, being instructed in the leading circumstances of the life of the deceased, composed and chanted eulogies having some reference to these circumstan-

ces, but in which flattery was by no means spared. Then, when the time arrived for the body to be carried to the funeral pile, a choir of hired mourners attended, who by their bare breasts, which they often smote, their dishevelled hair, and their mournful chants and profuse tears, moved, or sought to move, the minds of the spectators in favor of the deceased, and to compassion for his bereaved friends, whose respect for his memory their own presence indeed indicated. These women were under the direction of one who bore the title *præfica*, who regulated the time and tone of their lamentations. They were attired in the black robe of mourning and affliction, called by the Romans *pulla*. It should be observed that, as intimated by the prophet Jeremiah, a principal object of the displays of the hired mourners was to rouse the sorrow of the bereaved relatives, maintaining the excitement of affliction by enumerating the virtues and qualities of the deceased, as well as, by the same means, to excite the sympathising lamentations of those not immediately interested in the event.

The scene represented in the engraving is a Turkish cemetery, to which the immediate female relatives pay daily visits to the grave for some days after the interment; but in cases of unavoidable absence their places are also supplied here by the hired mourning women.

COURTESY.



WE do not hesitate to claim for courtesy, as Doctor Johnson did for cleanliness, a place among the virtues. It is a virtue, and one which greatly promotes the comfort and happiness of mankind. It is the sugar in the cup of life—the sweetener of domestic and social existence. The very name of this grace is so associated with the stiff, frigid, and in some instances, ludicrous forms of etiquette, that we are apt to over-

look its worth, and have inadequate ideas of its importance. These forms, unless they be all the more extravagant, are by no means to be neglected; but it should not be forgotten that they are often punctiliously observed by persons who do not know what real politeness is—in whose minds the sentiments that create true courtesy have no place.

To be courteous in the best sense, we must have an humble estimate of ourselves and our attainments. Excessive vanity and true politeness will not be found together. When you meet with a person who is on the very best terms with himself, and has a most extravagant idea of his own importance, you need not expect to receive very courteous or respectful treatment from him. It can scarcely have escaped the notice of the least observing, that the artificial manners current in society are constructed in deference to the sentiment of humility. "The tendency of pride," says one of the greatest and best of men, "to produce strife and hatred, is sufficiently apparent from the pains men have been at to construct a system of politeness, which is nothing more than a sort of mimic humility, in which the sentiments of an offensive self-estimation are so far disguised and suppressed as to make them compatible with the spirit of society; such a mode of behavior as would naturally result from an attention to the apostolic injunction, 'Let nothing be done through strife or vain glory; but in lowliness of mind let each esteem other better than themselves.'" And if even the hollow forms of this virtue be so important that we can not dispense with them, how much more valuable must the reality be; if the painting be both useful and pleasing, how excellent and charming the original! Humility, then, it should be kept in mind, is essential to genuine courtesy. The really humble individual will not usurp a place to which he has no claim. He will be content with his own share, or rather less, in conversation. Even when conscious of being in the right, he will not express his convictions in that rude and boisterous tone, which creates disgust both at the speaker and what he says; he will not state his views as if they were so many self-evident axioms, reminding wise and

sensible listeners of the taunt of a venerable scripture worthy, "No doubt but ye are the people, and wisdom shall die with you." He will beware of exalting himself above others; of hinting even indirectly their inferiority to him. He will not take the faults and misfortunes of others as incense to his own vanity—a practice which, though common, is mean and despicable. It is easy to see how an humble opinion of one's self will thus promote genuine politeness.

Affectionateness is another of its essential prerequisites. To be pleasingly well-bred, we must have a regard for those with whom we mingle; for its absence no artificial deference will compensate. The great desire of every person when he goes into society, should be to contribute as largely as possible to the general fund of happiness—to impart as well as receive pleasure. Good will toward all with whom we feel it right to associate, must shine through the countenance, flow from the tongue, be conveyed in the cordial grasp of the hand: and in a thousand ways, easier felt than described, be made apparent. Why should we blush to confess that we have a kindly feeling toward our fellow-creatures? Why seek to hide the sympathies that are so honorable to us? Why not circulate as widely as we can, those feelings of brotherhood which are of such advantage to our race? There are some, indeed, who have so degraded themselves that they may be thought hardly entitled to affection. But even when called to mix with such persons, we should remember that kindness has a killing power, and that the best way to make a man respect himself, is to show that others still would fain respect him, would he but act so as to enable them to do so. Affectionateness is indispensable to that kind of politeness which a man with a heart relishes. There is no mistaking cold artificial manners for the genuine courtesy of the heart. Persons with the gloomy and scowling look—the harsh, querulous, and domineering tone—on whose brows you can trace the clouds of the quarrel that was just hushed up as you crossed their threshold, never can be courteous in the best sense of that term. There is no good society, no circle worth spending an hour

in, where love is not a guest. Her presence is indispensable to the "feast of reason and the flow of soul."

A scrupulous and delicate regard to the feelings of others, is also an essential ingredient in the character of a well-bred person. The most guarded, indeed, may occasionally trespass through ignorance or inattention, but they who do so designedly, violate the first law of correct manners, which is to make all around us feel as easy and cheerful as possible. There are some persons so sensitive and touchy on almost every topic, whose sensitiveness, too, arises from their overweening self-conceit, that one can scarcely be expected so to shape his speech as not to give them offence; while there are those who have so little regard for the feelings of others, that we almost feel it a duty, when an opportunity occurs, to lend them a pretty hard blow in return. We quite agree with the sentiment of one of the greatest of moralists—"They who can not take a jest, ought not to make one." These exceptions apart, however, there is such a thing as wantonly tampering with the feelings of those with whom we mingle, which is one of the grossest outrages upon good breeding. If the gentle Cowper was right when he said that he would not enter upon the list of his friends, the man who would heedlessly set foot upon a worm, what are we to say of those who intentionally would crush or wound that sensitive, and sprightly, and loving thing, the human heart? They should be sent to herd alone. They are the kind of natures whom one would be glad to see betake themselves to the cloister or the cave; they are among the nuisances of the social circle, the banes of domestic life. Higher motives apart, self-love should prevent such conduct. Who is altogether invulnerable? Is not that individual singularly fortunate—the rare exception—who has nothing in his personal appearance, habits, profession, past history, present condition, family connexions, and the like, fitted, when an uncourteous and unfeeling allusion is made to it, to stir a sigh, or kindle a blush? And every man is aware when such allusions in his own case would be felt cruel, and he should not forget to act toward his neighbor on the golden max-

im, "Do unto others as you would have others do unto you."

A prying and inquisitive disposition, too, is incompatible with true politeness. Impertinent curiosity is one of the chief banes of social intercourse. It is easy to see how it becomes so. You put a question respecting circumstances which you have no right to know anything about, and which common sense might tell you the party you interrogate is not willing to disclose. The latter must either equivocate, or directly falsify, or, much to the annoyance of his own feelings, state distinctly that the question is one you have no right to put, and which, therefore, he does not mean to answer. So that if to preserve tranquillity of mind, to impart as well as to receive pleasure, be the object of good manners, every Paul Pry in the social circle must be a very offensive person indeed. We should keep a "sharp look out" on those whose conversation is chiefly in the question form.

True courtesy has other elements on which we do not enlarge at present. There is, for example, purity of conversation—that purity which teaches us to shun not merely open obscenity, but which is often as dangerous—covert insinuation. Then there is the propriety of feeling as much at ease as may be consistent with due respect to others. "Ease," Lord Chesterfield says, "is the standard of politeness." We must be courteous to those beneath our own roof, would we practise this virtue with grace in society. We may rest assured that politeness is a grace of no mean order. Some may affect to condemn it: it says the less for their sense, their taste, their virtue. That man has need of far more merit than falls to the share of ordinary mortals, who dares to act in contravention of the established forms and usages of society; and even the most accomplished in mind will be all the better that they be accomplished in manners too. It is a vulgar error that a man will scarcely be a *genius* and at the same time a *gentleman*.

THE moment of parting is the first moment that we feel how dear we are to each other. The reserves of the heart are broken, and the moved spirit speaks as it feels.

REAL GREATNESS.



He who possesses the divine powers of the soul, is a great being, be his place where it may. You may clothe him with rage, chain him to slavish tasks

—but he is still great. You may shut him out of your houses, but God opens to him heavenly mansions. He makes no show indeed in the streets of a splendid city, but a clear thought, a pure affection, a resolute act of a virtuous life, will have a dignity of quite another kind and far higher, than accumulation of brick and granite, of plaster and stucco, however cunningly put together, or though stretching far beyond our sight.—Nor is this all. Real greatness has nothing to do with a man's sphere. It does not lie in the magnitude of his own outward agency, in the extent of the effects which it produces. Perhaps the greatest men in our city, at this moment, are buried in obscurity. Grandeur of character is wholly in the force of thought, moral principle and love, and this may be found in the humblest condition of life. A man brought up to an obscure trade, and hemmed in by the wants of a growing family, may in this narrow sphere, perceive more clearly, discriminate more keenly, seize on the right means more decisively, and have more presence of mind in difficulty, than another who has accumulated vast stores of knowledge by laborious study, and he has more of intellectual greatness. Many a man who has gone but a few miles from home, understands human nature better, detects motives, and weighs character more sagaciously, than another who has traveled over the known world, and makes a name by his reports of different countries. It is the force of thought which measures intellectual, and so it is the force of principle that measures moral greatness, that highest of human endowments, that brightest manifesto of the divinity. The greatest man is he who chooses the right with invincible resolution, who resists the sore temptations from within and without, who

bears the most heavy burden, cheerfully, who is calmest in storms and most fearless under menace and frowns, whose reliance on truth, on virtue, on God, is most unfaltering—and is this a greatness which is apt to make a show, or which is more likely to abound in conspicuous stations?

THE BRIGHT SIDE OF HUMANITY.

THERE are good men everywhere. There are men who are good for goodness' sake. In obscurity, in retirement, beneath the shadow of ten thousand dwellings, scarcely known to the world, and never asked to be known, there are good men; in adversity, in poverty, and temptations, amid all the severity of earthly trials, there are good men, whose lives shed brightness upon the dark clouds that surround them. Be it true, if we must admit the sad truth, that many are wrong, and persist in being wrong; that many are false to every holy trust, and faithless toward every holy affection; that many are coldly selfish, and meanly sensual; yes, cold and dead to everything that is not wrapped up in their own little earthly interest, or more darkly wrapped up in the veil of fleshy appetites. Be it so: this is not all that we are obliged to believe. No: there are true hearts amid the throng of the false and the faithless. There are warm and generous hearts, which the cold atmosphere of surrounding selfishness never chills; and eyes unused to weep for personal sorrow, which often overflow with sympathy for the sorrows of others. Yes, there are good men and true men. God from on high doth bless them, and giveth his angels charge to keep them; and nowhere in the holy record are these words more precious or strong, than those in which it is written that God loveth the righteous ones. Such men are there. Let not their precious virtues be distrusted. As surely and as evidently as some men have obeyed the calls of ambition and pleasure, so surely and so evidently have other men obeyed the voice of conscience, and "chosen rather to suffer with the people of God, than to enjoy the pleasure of sin for a season." Why,

every meek man suffers in conflict keener far than the contest for honor and applause. And there are such men, who, amid injury and insult, and misconstruction, and the pointed finger, and the scornful lip of pride, stand firm in their integrity and allegiance to a loftier principle, and still their throbbing hearts in prayer, and hush them to the gentle motion of kindness and pity. Such witnesses there are even in this bad world: signs that a redeeming work is going forward amid its derelictions; proofs that it is not a world forsaken of heaven; pledges that it will not be forsaken; tokens that cheer and touch every good and thoughtful mind, beyond all other power of earth to penetrate and enkindle it.

DEATH OF GENERAL WOLFE.



N 1759 It was resolved by the British government to make a vigorous and effectual effort to conquer Canada from the French. Three expeditions were prepared which were all ultimately to unite. General Amherst was to march from New York, seize the forts of Ticonderoga and Crown point, and sailing along Lake Champlain, and down the Richelieu into the St. Lawrence, join General Wolfe, who by that time would have arrived before Quebec with a fleet and army. The third expedition was to take Fort Niagara; afterward, sailing across Lake Ontario and down the Cataragui, take Montreal; and then, if necessary, co-operate with Amherst and Wolfe. The plan was a bold one, but liable to many interruptions which could not be foreseen, or at least prevented. Each armament succeeded, in spite of many difficulties, in accomplishing its separate objects; and as Wolfe was successful without the co-operation of the others, we may confine our attention to him alone. The fleet containing Wolfe and his army arrived at the island of Orleans with-

out obstruction. Montcalm, the French commander-in-chief, a brave officer, immediately encamped with a numerous army, composed of regular troops, militia, and Indians, along the shore, down to the banks of the Montmorency, a river which literally falls into the St. Lawrence about seven miles below Quebec. He rightly judged that Wolfe would try to land below, not above the city. Meantime fire-ships were sent floating down the river, and nothing could have saved the English fleet and transports, if the sailors, with daring courage, had not boarded the burning vessels, and towing them on shore, left them to blaze away to the water's edge. The attempt was made twice, and each time failed in the same manner. Wolfe landed, and tried to cross the Montmorency above the falls, in the face of the French army, but was driven back with a loss of 500 men and many brave officers.

The defeat mortified the young hero so severely as to bring on a fever, but though he was greatly reduced by his illness, his anxiety to retrieve his reverse doubtless strung his mind to that pitch of determination which enabled him to accomplish his object. The English took possession of Point Levi, opposite Quebec; and the fleet sailed past the city without damage. Montcalm deemed himself perfectly secure above the city, never imagining that Wolfe would effect a landing. He therefore only placed a numerous line of sentinels along the summit of the steep and rocky banks. Time was now becoming precious to Wolfe; it was the beginning of the month of September, and a Canadian winter was not far distant. After anxious searching, he selected a little indentation of the bank, rather more than a mile above the city, still called Wolfe's cave. Here he proposed to land the troops in silence and secrecy during the night, and making them clamber up a narrow path, that at present, though well-beaten, is difficult of ascent in broad daylight, to form them in order of battle on the table-land above, called the plains of Abraham. On the 13th of September, an hour after midnight, the first division of the troops landed, one of the first being Wolfe himself. "I scarcely think," he whispered to an officer near him, "that there-

apprehension of certain branches of learning, but the operation, both on the intellect and on the character, of all those agencies by which the human being is surrounded between the periods of infancy and manhood. If these influences be on the side of evil, the sentiment of emulation will either be stifled or directed habitually to pursuits that are vain, vicious, and vile. If they be good, the young mind will be instructed as to the legitimate objects of the emotion, and the temper in which they ought to be prosecuted. How powerfully each order of agencies acts we have innumerable proofs. If, to take an illustration from a well-known passage in ancient history, the love of fame co-operated in the mind of Brutus with the love of country, to determine him on the sacrifice of his offspring:

"Vinct amor patriæ, laudumque immensus cupido,"

how must the principle of emulation have been warped and perverted by the sublimely barbarous notions of the nation and the time! And it was probably the false light in which he had been taught to contemplate the deed of his progenitor, that led the younger Brutus to the perpetration of a crime almost equally repugnant to unsophisticated nature, the assassination of his benefactor and his friend. To take instances of a class—the prize-fighter who vaunts his brutal strength and brutal science as superior to those of his brother boxers; the miss whose desire is fulfilled if she can flaunt in gayer silks than the other girls of the neighborhood, and be seen hanging on the arm of a more buckish admirer—are examples from each of the sexes of the vast influence exerted by early training in lowering the sentiment of emulation. But this influence, as that of temperament, is not all on one side. By imbuing the heart of youth with the best principles, and storing its intellect with the choicest knowledge; by placing constantly before it the noblest models of genius and virtue, that it may drink in their spirit, and *look itself into their likeness*; by surrounding it with circumstances calculated to foster its aspirings and invigorate its efforts after excellence, and removing such as clog or cramp these—

"Repress its noble rage,
And freeze the genial current of the soul,"

by lenient censure of its defects, and liberal praise of its successes; by such means as these we shall enlist this noble susceptibility in the cause of goodness, and give it a direction the happiest in its results alike to the individual and mankind.

We can not conclude without a brief notice of the evidence deducible from this part of our constitution of the benevolence of the Deity. This quality is strikingly displayed, first, in the implanting the affection we have been considering, and, secondly, in the provision for its diversified direction. In emulation we have the chief primary incentive to the acquisition of knowledge. The wish to be informed would lose much of its vividness, if ignorance were no longer regarded as shameful. It is the principle we have been considering that gives the original impulse to enter on the paths of literature and science—paths that at first are thorny and repulsive, and that only appear charming as we proceed. Literature and science have indeed inherent attractions amply sufficient to detain the initiated, but emulation it is that must attract to them the novice. It is this that prevents his becoming disheartened by the difficulties with which he must struggle in the pursuit of knowledge; that nerves him for the tedious and difficult ascent of

"The steep where fame's proud temple shines afar."

Divest man of this capacity, and the freshness and buoyancy of his being are gone with it. The choicest of the pleasures of hope and of taste, being those dependent on emulation, are annihilated. Society stagnates, learning is neglected, and life becomes a dull, because an *objectless* routine.

Nor is the goodness of God less conspicuous in providing for this faculty such diversity of aim. The constitution of the world, and the condition of man, necessitated its exercise toward a variety of objects. The all-wise and merciful Creator has, therefore, seen fit to implant in different minds certain native tendencies and preferences, by virtue of which they are induced to enter on different courses of useful exertion. By this arrangement there is secured at once a large amount of distinction to individuals, and an increase of general advantage to society.

PERICLES.



HE birth of Pericles appears to have taken place a little later than the year 500 before Christ. He was descended of the noblest blood of Athens, but was inferior in wealth to many among his contemporaries. At an early age he showed signs of great abilities. His education was conducted by the ablest teachers of the usual accomplishments; and, in addition, he exercised and sharpened his mental powers by diligent and eager study of the deepest speculations of the Greek philosophers. His infancy and boyhood witnessed the stirring events of the Persian war, and the rapid growth of Athens in wealth and dominion. Such events, with the brilliant career laid open to his distinguished countrymen and predecessors, Themistocles and others, were highly calculated to fan and nourish the ambition of a powerful mind; and even in youth he seems to have formed his character and carriage upon the model becoming a statesman. He early attracted notice, not only by his sweetness of voice, fluency of language, and dignified beauty of person, which reminded the aged of the usurper Pisistratus, but also by the gravity of his demeanor and decorum of his conduct. From his first entrance into public life, he devoted himself with unremitting application to business; he was never to be seen out of doors but on the way between his house and the seat of council; he declined all invitations to the entertainments of his acquaintance, and confined himself to the society of a very select circle of intimate friends. He bestowed the most assiduous attention on the preparation of his speeches; and so little disguised it, that he used to say he never mounted the platform without praying that no inappropriate word might drop from his lips. The impression thus produced was heightened by the calm majesty of his air and carriage, and by the philosophical composure which he maintained under all provocations. And he was so careful to avoid the effect which familiarity might have on the people, that

he was sparing even in his attendance at the assembly, and, reserving his own appearance for great occasions, carried many of his measures through the agency of his friends and partisans.

After the disappearance of Aristides and Themistocles, Cimon succeeded to the direction of the state, and was, for his personal qualities, as well as for his birth and wealth, the recognised head of the aristocratic party. His talents as a general and politician were approved by a series of brilliant successes, and his character was well suited to acquire and retain popular favor; for he was affable, of easy access and convivial habits, and both by policy and temper liberal even to ostentation. His fortune, large by inheritance, was largely increased by the spoils of the war; and he made it contribute to his power by seasonable presents to the poor, by keeping open table for the division of citizens to which he belonged, by throwing open his private gardens and orchards to the public, constructing new walks for their recreation, and, in short, by every sort of popular largess.

Pericles first came forward in public life, B.C. 469. Cimon's frequent absence in military commands gave to the young aspirant a great advantage, which he improved by degrees, and before long became the acknowledged chief of a powerful party. On the other hand Cimon possessed a powerful engine in his immense wealth, which the more limited means of Pericles could not rival. To obviate this, Pericles became the author of a series of measures, bad, as it appears to us, in principle, and pernicious in their ultimate results, though not destitute of plausible grounds on which they might seem proper to the author, and on which they have been defended by favorable historians. We allude to those by which the revenue was diverted from the legitimate objects of all revenue—the payment of expenses of government, the execution of works of national utility, and, under moderate restrictions, national luxury and grandeur, and the relief of temporary and accidental distress—to provide shows and amusements, and to maintain a large proportion of the poorer class, almost in idleness, as pensioners on the state. It was probably



Bust of Pericles.

with a view to the development of this policy, and to his own security in so doing, that he proposed and carried a law, by which the powers of the ancient and revered court of Areopagus, a body essentially aristocratic in its constitution, were greatly narrowed: among other things the control of the treasury was taken away from it, and vested in the assembly of the people. Events which overclouded for a time the favor and esteem in which Cimon was still held, enabled the democratic party to procure his banishment in 461, or, as some place it, two years later. Wars followed with the Bœotians and Spartans, in which the Athenians, on the whole, succeeded so ill, as to give the friends of Cimon a good opportunity of contrasting his glories with the ill-success of the existing administration; and within five years of his banishment he was recalled, apparently with the full concurrence of Pericles. A sort of coalition between the most respectable and moderate of both parties was then formed; and until the death of Cimon, B. C. 449, party strife was almost at an end. Cimon, however, was too wise and temperate to satisfy a large section of his followers; and the attempts of the aristocratical party to gain the ascendancy were renewed, after his death, under the guidance of one Thucydides, not the historian of that name. He was an able man, well skilled in the art of managing a popular assembly; but he was striving in a cause seldom successful—to retard the spirit of the age. The contest was ended by his banishment in 444; and from that time till death, with a short interruption or two, the sway of Pericles over the minds and councils of the Athenians became little less than absolute.

A truce for thirty years, concluded with Sparta B. C. 445, left him at liberty to develop his domestic policy. This, setting aside the question how far, in framing that policy, he was actuated by personal motives, was directed, first, to extend and strengthen the Athenian empire; secondly, to raise the confidence and self-esteem of the Athenians themselves to a level with the lofty position which they occupied. At this time, those states which during the Persian war had entered into alliance

with Athens were reduced almost into the condition of subjects; and it was sought to increase the power of the leading state by converting her assumed authority into a still more absolute and recognised dominion. Before this time the contribution, originally levied by common consent, applied to common purposes, and kept in a common treasury in the sacred island of Delos, had been arbitrarily increased, and the place of deposit had been removed to Athens. The next step was to deny all responsibility as to the application of it; and to maintain the right of the Athenians, so long as they fulfilled the original object of its imposition, the protection of Greece against the common enemy, to dispose of the surplus after their own desire. The means thus placed at his disposal enabled Pericles, during the thirty years' truce, to carry still further that application of the public revenue, toward satisfying the wants and furnishing the amusements of the people, of which we have before spoken, and to execute those architectural wonders, which, even more than his military successes and political honors, have illustrated his name in all succeeding ages. The city and harbor of Piræus had been fortified by Themistocles; the long walls, which connected the city and the harbor, had been built by Cimon on a scale which defied such means of assault as the military science of the day could bring against them. Thus Athens, secure against danger by land, and sure of access to the sea, enjoyed the advantages of an island. It was now that the Acropolis was covered with those magnificent and lasting edifices, which even to this day would scarce have shown the injuries of time, if man had spared them. A splendid fortified portal, called the Propylæa, at once guarded and ornamented the sacred precinct, in the middle of which, among other buildings of lesser note, rose the Parthenon, or temple of Minerva, constructed of the purest and most brilliant marble, and adorned within and without by the richest sculptures, designed by Phidias, the Homer of Grecian art. The splendid porticoes which ran all round it were lined with the friezes and metopes which form the bulk of the Elgin marbles in the British Museum;

and the pediments at either end were filled with groups of statues, which, mutilated as they are, are acknowledged to be second to none among the masterpieces of antiquity. They were richly ornamented with gold, and relieved, a practice not familiar to modern taste, with the most brilliant colors. Within was the statue of the goddess, of colossal size, and of the most costly materials, ivory profusely ornamented with gold.

While Pericles was thus laboring to render Athens the focus of attraction to Greece, his own house, though he abstained from indiscriminate visiting and convivial entertainments, was the resort of the most eminent teachers of philosophy and literature. We can not here pass silently over his connexion with the celebrated Aspasia, a favorite subject of allusion and ridicule with the scandal-mongers and satirists of the day. She was a Milesian, of great beauty and talent, educated far above the usual level of the sex in Greece, with the view of making a profitable market of her accomplishments. Her condition in this respect is not to be judged according to the refinement of modern manners, still less by the pure rules of Christian morality. The fascination of her person, manners, and conversation, won for her the enduring love of Pericles, who in her behalf divorced his wife, and placed her at the head of his household: a legal marriage he was unable to contract with her. She was his constant companion, the partner of his counsels, and his adviser; she engaged in equal terms in the most abstruse discussions of the philosophers whom Pericles loved to assemble at his house; and her reputation for eloquence was such that, in one of the dialogues of Plato, Socrates represents himself as her pupil, with the intimation that she "had made many good orators, and Pericles among the number." Indeed her influence over the great statesman afforded matter for continual attacks to the comic poets, such as calling them the Jupiter and Juno, the Hercules and Omphale of Athens. It also gave ground occasionally to more serious charges; for men boldly asserted, that to gratify her personal animosities, he had engaged his country in the wars against Samos and Megara.

And though the influence of Pericles was too deeply rooted for his enemies to venture on a direct attack, it is clear that they were numerous and powerful, from the success with which they aimed an indirect blow at both his happiness and his reputation, by assailing some of his most intimate friends. The freedom of discussion and speculative turn of conversation encouraged at his house, where many of the speakers treated the received religion of Greece with very light respect, furnished ground for a criminal prosecution against his former preceptor and most intimate friend, Anaxagoras, the issue of which is not altogether clear: it appears however that the philosopher found it either necessary or expedient to retire from Athens for the remainder of his life. Aspasia was involved in the same charge of impiety, coupled with a grosser and more degrading accusation; and owed her deliverance to the great personal exertions of Pericles, who condescended on this occasion to use even tears and personal entreaties to work upon the judges in her behalf. These prosecutions took place just before the outbreak of the Peloponnesian war: the storm however soon blew over, and his power and reputation stood as high as ever during the remainder of his life, with the exception that a charge of peculation was brought against him; but the historian Thucydides, a contemporary of the highest veracity, and no friend to Pericles, has testified to his integrity in the strongest terms. The extent of his influence is most remarkably shown by one measure which he persuaded the Athenians to adopt. This was no less than a transfer of the whole population of Attica with all their moveables to the space included within the walls of the city and its ports, abandoning the country, without resistance, to the invasion of the enemy. His grounds for this were, the inexpediency of risking the limited body of Athenian citizens in pitched battles against the Peloponnesian armies, which were superior both in number and reputation, and even if defeated, might be recruited to any amount; and on the other hand, the superiority of the Athenians at sea, which enabled them to draw inexhaustible supplies of all things needful

from their subjects and trading connexions, and the strength of their city, which defied such methods of assault as military skill had yet invented. These advantages, and their abundant revenue, would enable them at pleasure to protract the war; while the funds of the Peloponnesians, who derived little profit from trade and colonies, were not likely to last through an expensive struggle. And he warned them not to seek new conquests, but to content themselves with defending what they already enjoyed.

The event proved the justice of his views in all respects. The first invasion of Attica took place B. C. 431. Though the people had reluctantly assented to his policy, and removed into the city, yet the spectacle of their country ravaged by an insulting enemy tried their patience severely, and they demanded with loud and bitter reproaches to be led into the action. Pericles remained unmoved, and would neither lead an army to the field nor summon an assembly to deliberate on the subject. Trees, he said, when cut down might shoot up again, but men were not so easily replaced. But he provided a vent for the active spirit of the people, by sending various expeditions to ravage the seacoast of the enemy's country. At the close of the campaign the usual tribute of funeral honors to those who had fallen in battle was celebrated; a circumstance here mentioned because Pericles pronounced the funeral oration on this occasion, and in the want of any genuine specimen of his eloquence the speech attributed to him by Thucydides, becomes doubly interesting as being very possibly a pretty faithful report as to the topics which Pericles employed on the occasion, and an imitation of his style.

The second year of the war was more calamitous. In the course of it the celebrated plague of Athens broke out. The general misery produced by this fearful visitation emboldened the enemies of Pericles to institute a prosecution, in consequence of which he was deprived of his military command, and heavily fined. In the following year he recovered both his office and his ascendancy over the people. But in the summer B. C. 429, he was himself carried off by a lingering illness,

having already lost by the pestilence his two legitimate sons, his sister, and the most valued of his friends. The death of his younger son, a very promising youth, appears to have cut him to the heart. He placed the funeral garland on the head of the corpse, according to custom, but in doing so—a most unusual mark of emotion—he burst into tears. When he was near his end, and apparently insensible, his friends, gathered round his bed, relieved their sorrow by recalling the remembrance of his military exploits, and of the trophies which he had raised. He interrupted them, and observed that they had omitted the most glorious praise which he could claim. “Other generals had been as fortunate, but he had never caused an Athenian to put on mourning:” a singular ground of satisfaction, notwithstanding the caution (herein alluded to) of his military career, if he had been conscious of having involved his country in the bloodiest war it had ever waged. His death was a loss which Athens could not repair. Many were eager to step into his place; but there was no man able to fill it; and the fragments of his power were snatched by unworthy hands. He died when the caution on which he valued himself was more than ever needed to guard Athens from fatal errors; and when the humanity which breathes through his dying boast might have saved her from her deepest disgrace.

LENGTH OF DAYS.

At Berlin and London the longest day has sixteen and a half hours. At Stockholm and Upsal, the longest has eighteen and a half hours, and the shortest five and a half. At Hamburg, Dantzic, and Stettin, the longest day has seventeen hours, and the shortest seven. At St. Petersburg and Tobolsk, the longest has nineteen, and the shortest five hours. At Torneo, in Finland, the longest day has twenty-one hours and a half, and the shortest two and a half. At Waudorbus, in Norway, the day lasts from the 21st of May to the 22d of July, without interruption; and in Spitzbergen the longest day lasts three months and a half.



Portrait of William Pitt, Lord Chatham.

LORD CHATHAM.



WILLIAM PITT, usually distinguished as the *great* Lord Chatham, was born at London in the year 1708, and was the son of Robert Pitt, Esq., of Boconnoc in Cornwall. He was educated first at Eton and afterward at Trinity college, Oxford, of which he was entered a gentleman commoner in 1726. On leaving the university he purchased a cornetcy in the Blues; but urged probably by the desire of obtaining a more suitable field for the display of his abilities than a military life afforded, in 1735 he procured himself to be returned to parliament for the family borough of Old Sarum. Sir Robert Walpole was then at the head of affairs; and Pitt immediately joined the opposition, which eventually compelled that minister to retire in 1742. For the part which he thus took, he was, the year

after he entered parliament, deprived by Walpole of his commission, but was compensated by being made one of the gentlemen of the bedchamber to the prince of Wales. His eloquence, as soon as he began to take a part in the debates, raised him to distinction and importance; and imperfectly as the proceedings of the house were then communicated to the public, his reputation as one of the most powerful speakers of the day seems to have rapidly spread itself over the nation. It was in 1740, in the course of his contest with Walpole's administration, that on a motion relating to impressment, he made his famous reply to Mr. Horatio Walpole, the brother of the minister, vindicating himself from the double charge of youth and theatrical elocution. Walpole's administration was succeeded by that of Lord Carteret (afterward the earl of Granville), but this change did not introduce Pitt to office. The celebrated Sarah, dutchess of Marlborough, however, left him in 1744 a legacy of £10,000, in reward, as it was expressed in the will, of the noble disin-

terestedness with which he had maintained the authority of the laws, and prevented the ruin of his country. The following year he resigned his post in the household of the prince. In 1746, under the premiership of the duke of Newcastle, Mr. Pitt was for the first time chosen to fill a place in the government, being appointed to the office of vice-treasurer for Ireland, from which he was transferred the same year to that of paymaster-general of the forces. In this situation, which he held for nearly nine years, he displayed his characteristic activity, energy, and decision, and the most high-minded integrity and contempt for many of the customary profits of office. In 1755, however, on a disagreement with the majority of his colleagues, he resigned: but, in little more than a year after, the force of public opinion compelled his recall; and on the 4th of December, 1756, he was appointed principal secretary of state. In the April following, finding his views still thwarted by the rest of the cabinet, he again retired; but within less than three months the king was obliged to yield to the national voice, the ministry was driven from power, and a new one was formed under the auspices of Pitt, who, reinstated in his former place of secretary of state, now exercised under that name the authority of premier. For the next four years Pitt may be regarded as having been the director of the energies of England; and they are four of the most glorious years in the history of the country. Victory crowned the British arms wherever they appeared, whether on sea or on land; the French were beaten at almost every point both in the east and in the west; the vast territory of Canada was wrested from them, almost before the government at home was aware that it was in danger; and they were eventually stripped of nearly all their other colonies in every part of the world. Along with these successes abroad, tranquillity and contentment at home no less remarkably distinguished the supremacy of this able, patriotic, and popular minister. In October, 1760, George II. died, and the ascendancy of new principles which the new reign brought along with it, before long compelled Pitt to tender his resignation of his services. His ad-

ministration terminated, and that of Lord Bute commenced in October, 1761. Although Pitt, however, had found it necessary to retire from the management of affairs, his sovereign was so sensible of his great deserts, that a barony was bestowed upon his lady, and a pension of three thousand a year granted to him for their conjoint lives and for that of his eldest son. After this, he remained out of office till 1766, when, after the failure of the Rockingham administration, it was found necessary in the embarrassed state of public affairs, occasioned by the first troubles respecting the American stamp act, again to call for the assistance of the man who was generally believed best able to serve the country; and in July that year he was intrusted with the formation of a new cabinet. In the arrangement which he made upon this occasion he reserved to himself along with the premiership the office of lord privy-seal, as better suiting than one of more active duties, the enfeebled state of his health, now greatly broken down by attacks of the gout, to which he had long been subject. He also went to the upper house with the title of earl of Chatham. He now applied himself with his best endeavors to heal the differences with America; but the opposition of his colleagues rendered him unable to carry into effect the measures which he would have taken for this purpose; and, in December, 1768, he again resigned. Lord Chatham lived for nearly ten years after this; and, although his increasing infirmities compelled him to spend much of his time in retirement in the country, he frequently presented himself in his place in parliament, when important discussions were to take place, and never distinguished himself more than he did, on some of these occasions, by his eloquent and indignant appeals against the headlong course of misgovernment in which ministers were proceeding, and his maintenance of the constitutional rights and liberties of his countrymen. It was the contest with America, which called forth from Lord Chatham the most brilliant efforts of his latter days, and perhaps of his life. He may be said to have expired in resisting the infatuated measures which, in provoking this war, led to the dismemberment

of the empire. On the 7th of April, 1778, when a motion on this subject was to be discussed, he appeared for the last time in the house of lords, leaning on the arm of his son, with his majestic figure wrapped in flannels, and his face pale as death. After delivering his sentiments with his accustomed fervor, he sat down. On rising again, however, a short time afterward, to reply to some observations which had been made upon his address, he fell back in the arms of the duke of Cumberland and Lord Temple, who sat beside him, speechless, and to all appearance, insensible. Lord Chatham recovered so far as to be removed to his country-house at Hayes, where he lingered till the 12th of May, when he expired, entirely exhausted, in the seventieth year of his age. The characteristics of this celebrated minister were vigor, decision, a mind prophetic of consequences, and an eloquence so commanding that probably nothing quite equal to it has distinguished any other speaker in modern times. Judging rather by the effects which it is recorded to have produced, than by any pretended reports of particular speeches, it must have contained an extraordinary share of the vehemence and power by which Demosthenes, in ancient Greece, "wielded at will that fierce democracy."

GENERAL WASHINGTON.



NE pleasant evening, in the month of June, in the year 17— a man was observed entering the borders of a wood, near the Hudson river, his appearance that of a person above the common rank. The inhabitants of a country village would have dignified him with the title of 'squire, and from his manner pronounced him proud; but those more accustomed to society, would inform you there was something like a military air about him. His horse panted as if it had been hard pushed for some miles, yet, from

the owner's frequent stops to caress the patient animal, he could not be charged with want of humanity; but seemed to be actuated by some urgent necessity. The rider forsaking a good road for a by-path leading through the woods, indicated a desire to avoid the gaze of other travellers. He had not left the house where he inquired the direction of the above-mentioned path, more than two hours, before the quietude of the place was broken by the noise of distant thunder. He was soon after obliged to dismount, travelling becoming dangerous, as darkness concealed surrounding objects, except when the lightning's flash afforded him a momentary view of his situation. A peal louder and of longer duration than any of the preceding, which now burst over his head, seeming as if it would rend the woods asunder, was quickly followed by a heavy fall of rain which penetrated the clothing of the stranger ere he could obtain the shelter of a large oak, which stood at a little distance.

Almost exhausted with the labors of the day, he was about making such disposition of the saddle and his own coat, as would enable him to pass the night with what comfort circumstances would admit, when he espied a light glimmering through the trees. Animated with the hope of better lodgings, he determined to proceed. The way, which was somewhat steep, became attended with more obstacles the farther he advanced; the soil being composed of clay, which the rain had rendered so soft that his feet slipped at every step. By the utmost perseverance, this difficulty was finally overcome without any accident, and he had the pleasure of finding himself in front of a decent looking farmhouse. The watch dog began barking, which brought the owner of the mansion to the door.

"Who is there?" said he.

"A friend who has lost his way, and in search of a place of shelter," was the answer.

"Come in, sir," added the speaker, "and whatever my house will afford, you shall have, with welcome."

"I must provide for the weary companion of my journey," remarked the other.

But the former undertook the task, and

after conducting the new-comer into a room where his wife was seated, he led the horse to a well-stored barn, and there provided for him most bountifully. On re-joining the traveller, he observed, "That is a noble animal of yours, sir."

"Yes," was the reply, "and I am sorry that I was obliged to misuse him so as to make it necessary to give you so much trouble with the care of him; but I have yet to thank you for your kindness to both of us."

"I did no more than my duty, sir," said the entertainer, "and therefore, am entitled to no thanks. But Susan," added he, turning to the hostess with a half-reproachful look, "why have you not given the gentleman something to eat?"

Fear had prevented the good woman from exercising her well-known benevolence; for a robbery had been committed by a lawless band of depredators, but a few weeks before, in that neighborhood, and as report stated that the ruffians were all well dressed, her imagination suggested that this man might be one of them.

At her husband's remonstrance, she now readily engaged in repairing her error, by preparing a splendid repast. During the meal there was much interesting conversation among the three. As soon as the worthy countryman perceived that his guest had satisfied his appetite, he informed him that it was now the hour at which the family usually performed their devotions, inviting him at the same time to be present. The invitation was accepted in these words:—

"It would afford me the greatest pleasure to commune with my heavenly Preserver, after the events of the day; such exercises prepare us for the repose which we seek in sleep."

The host now reached the Bible from the shelf, and after reading a chapter and singing, concluded the whole with a fervent prayer; then, lighting a pine knot, conducted the person he had entertained to his chamber, wished him a good night's rest, and retired to the adjoining apartment.

"John," whispered the woman, "that is a good gentleman, and not one of the highwaymen as I supposed."

"Yes, Susan," said he, "I like him

better for thinking of his God, than all his kind inquiries after our welfare. I wish our Peter had been home from the army, if it was only to hear this good man talk; I am sure Washington himself could not say more for this country, nor give a better history of the hardships endured by our brave soldiers."

"Who knows now," inquired the wife, "but it may be himself after all, my dear; for they do say he travels just so, all alone, sometimes. Hark! what's that?"

The sound of a voice came from the chamber of their guest, who was now engaged in his private religious worship. After thanking the Creator for his many mercies, and asking a blessing on the inhabitants of the house, he continued, "And now, Almighty Father, if it be thy holy will, that we shall obtain a place and a name among the nations of the earth, grant that we may be enabled to show our gratitude for thy goodness, by our endeavors to fear and obey thee. Bless us with wisdom in our councils, success in battle, and let our victories be tempered with humanity. Endow, also, our enemies with enlightened minds, that they may become sensible of their injustice, and willing to restore liberty and peace. Grant the petition of thy servant, for the sake of him whom thou hast called thy beloved Son: nevertheless, not my will, but thine be done. Amen."

The next morning, the traveller, declining the pressing solicitation to breakfast with his host, declared it was necessary for him to cross the river immediately; at the same time offering part of his purse as a compensation for what he had received, which was refused.

"Well, sir," continued he, "since you will not permit me to recompense you for your trouble, it is but just that I should inform you on whom you have conferred so many obligations, and also add to them by requesting your assistance in crossing the river. I had been out yesterday, endeavoring to obtain some information respecting our enemy, and being alone, ventured too far from the camp. On my return, I was surprised by a foraging party, and only escaped by my knowledge of the roads, and the fleetness of my horse. My name is George Washington."

Surprise kept the listener silent for a moment; then, after unsuccessfully repeating the invitation to partake of some refreshment, he hastened to call two negroes, with whose assistance he placed the horse on a small raft of timber that was lying in the river, near the door, and soon conveyed the general to the opposite side of the river where he left him to pursue his way to the camp, wishing him a safe and prosperous journey. On his return to the house, he found that while he was engaged in making preparations for conveying the horse across the river, his illustrious visitor had persuaded his wife to accept a token of remembrance, which the family are proud of exhibiting to this day. The above is only one of the hazards encountered by this truly great patriot, for the purpose of transmitting to posterity the treasures we now enjoy. Let us acknowledge the benefits received, by our endeavors to preserve them in their purity; and by keeping in remembrance the great Source whence these blessings flow, we may be enabled to render our names worthy of being enrolled with that of the Father of his country.

THE BOA CONSTRICTOR.



THE place which the boa should occupy in a regular system is not well determined, and this arises from the circumstance that travellers have entered much into the history and habits of the larger species of serpents without carefully describing the animals themselves. We shall be content to follow Blumenbach in stating that the enormous reptile usually called the boa constrictor is found in the East Indies and in Africa, and does not appear to differ much from the amaru of South America, which was worshipped by the Antis of Peru. It is the largest of serpents. Its average length appears to be about thirty feet, but it sometimes attains to forty, fifty, or even sixty feet; it therefore occupies the relative position among reptiles which

the elephant does among quadrupeds, and the whale among the inhabitants of the sea. In the venomous species, the poison fangs are in the upper jaw—somewhat larger than the other teeth, projected forward in the act of biting, but at other times disposed along the roof of the mouth. These are wanting in the boa, but otherwise the teeth are disposed much in the same manner as in other serpents—being long, sharply pointed, and inclined backward—of no use for mastication, but evidently intended only for the purpose of holding the prey. The genus is distinguished by having a hook on each side the vent; the body is compressed, inflated toward the middle; the tail is prehensile; the scales small, particularly upon the back of the head. The ground color of the boa constrictor is yellowish gray, with a large chestnut colored interrupted chain, extending down the back from the head to the tip of the tail, and subtrigonal spots down the sides. The name “constrictor” is derived from the terrible muscular power by which it crushes to death the unfortunate animals embraced in its folds. It is true that most serpents possess, in some degree, this constrictive power, but it is not commonly used by the smaller species in seizing their prey, the mouth and teeth alone sufficing for the purpose.

Requiring food only at long intervals, the boa constrictor, like most other serpents, spend the greater part of its life coiled up asleep, or in a state of stupor, in which, if it has recently been gorged with food, it may be overcome with little danger or difficulty, although to attack it in an active state would be madness. But when it becomes hungry, the gigantic reptile assumes an activity strikingly in contrast with the sluggish inertness it before exhibited. When properly in wait for prey, it usually attaches itself to the trunk or branches of a tree, in a situation likely to be visited by quadrupeds for the sake of pasture or water. In this posture it swings about, as if a branch or pendent of the tree, until some unhappy animal approaches, and then, suddenly relinquishing its position, it seizes the unsuspecting victim, and coils its body spirally around the throat and chest. After a few ineffectual cries and struggles, the poor en-



Attack of the Boa Constrictor on a Sleeping Lascar

tangled animal is suffocated and expires. It is to be remarked that, in producing this effect, the serpent does not merely wreath itself around the prey, but places fold over fold, as if desirous of adding as much weight as possible to the muscular effort; these folds are then gradually tightened with such immense force as to crush the principal bones, and thus not only to destroy the animal, but to bring its carcase into a state the most easy for its being swallowed. This having been effected, the boa addresses himself to the task of swallowing the carcase. Having pushed the limbs into the most convenient position, and covered the surface with its glutinous saliva, the serpent takes the muzzle of the prey into its mouth, which is capable of vast expansion; and, by a succession of wonderful muscular contractions, the rest of the body is gradually drawn in, with a steady and regular motion. As the mass advances in the gullet, the parts through which it has passed resume their former dimensions, though its immediate position is always indicated by an external protuberance. Their prey generally consists of dogs, goats, deer, and the smaller sorts of game. Bishop Heber considers as quite untrue the stories of their attacking such animals as the buffalo or the cheetah; but men are by no means exempt from their attacks. This is shown by the following anecdote, which the engraving illustrates:—

The captain of a country ship, while passing the Sunderbunds, near Calcutta, sent a boat into one of the creeks to obtain some fresh fruits which are cultivated by the few miserable inhabitants of this inhospitable region. Having reached the shore, the crew moored the boat under a bank, and left one of their party to take care of her. During their absence, the lascar, who remained in charge of the boat, overcome by heat, lay down under the seats and fell asleep. While he was in this happy state of unconsciousness, an enormous boa constrictor emerged from the jungle, reached the boat, had already coiled its huge body round the sleeper, and was in the very act of crushing him to death, when his companions fortunately returned at this auspicious moment; and, attacking the monster, severed a portion

of its tail, which so disabled it that it no longer retained the power of doing mischief. The snake was then easily despatched, and found to measure sixty-two feet and some inches in length.

GEMS OF THOUGHT.



CONVERSATION is the daughter of reasoning, the mother of knowledge, the breath of the soul, the commerce of hearts, the bond of friendship, and the nourishment of content.

Open your heart to sympathy, but close it to despondency. The flower which opens to receive the dew shuts against rain.

He who dreads giving light to the people is like a man who builds a house without windows for fear of lightning.

The shortest day of our year comes in winter—fit emblem of our life, at once dark, cold, and short.

Men, like books, have at each end a blank leaf—childhood and old age.

Graves are but the prints of the footsteps of the angel of eternal life.

Peace is the evening star of the soul, as virtue is its sun, and the two are never far apart.

Our sorrows are like thunder-clouds, which seem black in the distance, but grow lighter as they approach.

Universal love is like a glove *without* fingers which fits all hands alike and none closely; but true affection is like a glove *with* fingers which fits one hand only and sits close to that one.

Passion is a keen observer, but a wretched reasoner. It is like the telescope whose field is clearer, the more concentrated it is.

Esteem is the mother of love, but the daughter is often older than the mother.

The grafts that circumstances make in our character, we are apt to regard as its native fruit.

Our evil genius, like the junior member of a deliberative body, always gives its views first.

A gentle heart is like ripe fruit which bends so low that it is at the mercy of every one who chooses to pluck it, while the harder fruit keeps out of reach.

To seek to soothe a ruffian by reason, is to attempt to bind a buffalo with a garland of flowers.

Wisdom is an open fountain, whose waters are not to be sealed up, but kept running for the benefit of all.

Calumny is like the wasp that teazes and against which you must not attempt to defend yourself unless you are certain to destroy it; otherwise it returns to the charge more furious than ever.

Little minds rejoice over the errors of men of genius, as the owl rejoices at an eclipse.

Man passes his life in reasoning on the past, in complaining of the present, and trembling for the future.

Pleasure is seldom found where it is sought. Our brightest blazes of gladness are commonly kindled by unexpected sparks.

Misery requires action—happiness, repose.

Fancy rules over two thirds of the universe—the past and the future—while Reality is confined to the present.

Hope is like a bad clock, for ever striking the hour of happiness, whether it has come or not.

Riches are not easily acquired, and when acquired, are, with extreme care, preserved; but when death comes they are gone! Be not, therefore, too anxious for wealth. The poisonous tree of this world bears two fruits of exquisite savor; poetry, sweet as nectar, and the society of the good.

As a stone is raised with great labor up a mountain, but thrown down in an instant, thus are our virtues acquired with difficulty, our vices with ease.

The vicious, notwithstanding the sweetness of their words, and the honey of their tongues, have a whole storehouse of poison within their hearts.

There is no union between the thoughts, the words, and actions of the wicked; but the thoughts, words, and actions of the good, all agree.

The truly great are calm in danger, merciful in prosperity, eloquent in the as-

sembly, courteous in war, and anxious for fame.

Danger should be feared when distant, and braved when present.

Every one looking downward becomes impressed with his own greatness, but looking upward, feels his own littleness.

As a mound of earth raised by the ants, or the sands in the hour-glass, so religion, learning, and riches, increase only by degrees.

The allotted days and nights of human life, like a current down the sides of a mountain, pass away not to return.

SCRIPTURAL ALLUSIONS TO DEW.



OST or all of the grand phenomena and aspects of nature are mentioned in Scripture, and so applied as to teach or illustrate some im-

portant lesson. They are spoken of as declaring the glory of God in creation; they are employed to represent his dealings with the children of men. The snow, the hail, the thunder, and the storm, are appealed to as gradually showing forth his power and terrible majesty; the wind "that bloweth where it listeth," the early and the latter rain, and the gently dropping dew, are used as appropriate images of the blessings continually showered down from on high, and especially of the influence of the Holy Spirit upon the soul. The Bible, designed to be an intelligible record of divine instruction, abounds in imagery borrowed from material nature, and expressly adapted to arrest and charm the attention. It contains many beautiful allusions to the phenomena of dew, a few of which we propose making the subject of this article.

The beneficial effects of dew, in reviving and refreshing the entire landscape, have already been adverted to. How frequently do we observe the aspect of the fields and woods improved by the dews of

a single night? In the summer season, especially, when the solar heat is most intense, and when the luxuriant vegetation requires a constant and copious supply of moisture, an abundant formation of dew seasonably refreshes the thirsty herbs, and saves them from the parching drought. In eastern countries, like Judea, where the summer is fervid and long continued, and the evaporation excessive, dew is both more needed, and formed in much greater abundance, than in our more temperate climate. There it may be said to interpose between the vegetable world and the scorching influence of a powerful and unclouded sun—to be the hope and joy of the husbandman; the theme of his earnest prayer and heartfelt gratitude. Accordingly, the sacred writers speak of it as the choicest of blessings wherewith a land can be blessed; while the want of it is with them almost synonymous with a curse. Moses, blessing the land of Joseph, classes the dew among “the precious things of heaven;” and David, in his lamentation over Saul and Jonathan, poetically invoking a curse upon the place where they fell, wishes no dew to descend, upon the mountains of Gilboa. The Almighty himself, promising, by the mouth of one of his prophets, to bless his chosen people, says, “I will be as the dew unto Israel; he shall grow as the lily, and cast forth his roots as Lebanon.” Here the refreshing and fertilizing effects of dew beautifully represent the prosperity of the nation which God specially favors and protects. The dew is also employed, by the prophet Micah, to illustrate the influence of God’s people in the midst of an evil world, where he says, that “the remnant of Jacob shall be in the midst of many people, as a dew from the Lord.” What emblem more expressive of that spiritual life, in some of its members, which preserves a people from entire corruption and decay!

Another beautiful application of the dew in Scripture, is its being made to represent the influence of heavenly truth on the soul. In the commencement of his sublime song, Moses employs these exquisite expressions: “My doctrine shall drop as the rain, my speech shall distil as the dew; as the small rain upon the tender herb, and as the showers upon the

grass.” Similar passages might be quoted from the sacred writers, wherein, by a felicity of comparison that all must at once acknowledge, the word and ordinances of God are likened to the dew of the field. How strikingly the reviving effects of dew upon the parched and thirsty vegetation of the sun-scorched plain, typify the moral and spiritual freshness diffused by the word preached in its purity, and received with faith and love. As the dew of a night will sometimes bring back beauty and bloom to unnumbered languishing plants and flowers, and spread a pleasant freshness over all the fields, so will some rich and powerful exposition of revealed truth, or some ordinance, dispensed with genuine fervor, not unfrequently enliven and refresh a whole Christian congregation, or even spread a moral verdure over a large portion of the visible church. If the soul be stained in its intercourse with the world; if, like the grass on the wayside that is covered with dust, it contract impurity with the beaten paths of life, the word of God falls upon it with a refreshing influence, like the dews of night upon that grass, to water it, and to wash away all marks of contact with surrounding corruption. If it be scorched by the withering sun of persecution, and pine for spiritual nourishment and support, that same word bedews it with the sweetest influences, and affords it sustenance, in richness and salubrity like that of the heavenly manna itself.

But let us not forget that the word of God sheds a healing influence only when it is rendered effectual by the Spirit of all truth. The Spirit worketh through the instrumentality of the word; silently, secretly, and powerfully worketh; falling gently, operating unseen, and diffusing refreshment around, like the balmy dews of night. Of the Spirit’s agency the dew is, indeed, the finest and aptest illustration. As dew to the parched and drooping flower, so is the Spirit shed upon the Christian’s soul; as the “dew of Hermon,” or “the dew that descends upon the mountains of Zion,” spreading freshness and beauty over the whole surface of the ground, so is the Spirit poured out in rich abundance upon the church, the spiritual Zion, in times of reviving and refreshing

from the Lord. As we spring from our couch, therefore, on the bright summer morning, and walk joyfully forth into the fragrant fields, to breathe the inspiring air, feast our eyes upon the glowing mixture of colors in which all nature is arrayed, and listen to the sweet and various music that ascends from every grove, let us not fail to derive a high spiritual lesson from the dew that is so thickly strown upon the grass beneath our feet. Distilled in the silent night by the reciprocal influences of heaven and earth, it bathes and refreshes each blade and flower with its stainless moisture. Let us regard it as the chosen image of God's choicest blessing, the cleansing and sanctifying influence of his Spirit upon the heart of man.

THE FOOD OF MAN.

THE potato is a native of South America, and is still found wild in Chili, Peru and Monte Video. In its native state the roots are small and bitter. The first mention of it by European writers is in 1588. It is now spread over the world. Wheat and rye originated in Tartary and Siberia, where they are still indigenous. The only country where the oat is found wild is in Abyssinia, and thence may be considered a native. Maize or Indian corn is a native of Mexico, and was unknown in Europe until after the discoveries of Columbus. The bread-fruit tree is a native of South Sea islands, particularly Otaheite. Tea is found a native nowhere except in China and Japan, from which country the world is supplied. The cocoonut is a native of most equinoctial countries, and is one of the most valuable trees, as food, clothing, and shelter, are afforded by it. Coffee is a native of Arabia Felix, but is now spread into both the East and West Indies. The best coffee is brought from Mocha, in Arabia, whence about fourteen millions of pounds are annually exported. St. Domingo furnishes from sixty to seventy millions of pounds yearly. All the varieties of the apple are derived from the crab apple which is found native in most parts of the world. The peach

is derived from Persia, where it still grows in a native state, small, bitter, and with poisonous qualities. Tobacco is a native of Mexico and South America, and lately one species has been found in New Holland. Tobacco was first introduced into England from North Carolina, in 1586, by Raleigh. Asparagus was brought from Asia; cabbage and lettuce from Holland; horse-radish from China; rice from Ethiopia; beans from the East Indies; onions and garlicks are natives of various places both in Asia and Africa. The sugar cane is a native of China, and thence is derived the art of making sugar from it.

GLASGOW.



GLASGOW, is the most populous city in Scotland, and occupies a highly advantageous situation on the banks of the Clyde, in Lanarkshire, a few miles from the place where the river expands into an estuary, 42 miles from Edinburgh, 397 from London, and 196 from Dublin. The external appearance of this great city is elegant and impressive. The streets are regular in arrangement, and substantially built of smooth stone. The public buildings are in general handsome, and, in most instances, disposed in such a manner as to be seen to advantage. The more ancient part of the city extends along the line of the High street, between the cathedral and the river; the more modern and elegant part stretches toward the northwest. On the left bank of the river, and connected by three bridges, is situated the populous barony of Gorbals, bearing the same reference to Glasgow which Southwark bears to London. Westward from the lowest of the bridges, both sides of the river are formed into quays, which, owing to recent operations for deepening the channel, are now approached by vessels drawing about fourteen or fifteen feet water. The quay on the right or north bank



Glasgow, with Stockwell Bridge, from the south bank.

is denominated the *Broomielaw*. Twenty years ago the Broomielaw was a limited extent of quay, ranging along the northern side of the Clyde, from the Broomielaw, or Jamaica street bridge, downward, to which only vessels of a comparatively small amount of tonnage came up; and but five or six years ago, the southern side was an extent of green sward, on which the inhabitants could walk or sit, contemplating the "shipping" on the opposite side. But now the river is rendered wider and deeper at the Broomielaw; the northern quay extends an immense length along the bank; and on the southern side, where children might once safely gambol, and school-boys spent their Saturday holidays in rolling about among the grass, is now a handsome quay, with its sheds and cranes and pulleys, and a stair, facing the old stair on the northern side, immediately under the bridge, to which the "herring boats" did and still do come; and whence, in earlier and simpler days, most respectable citizens might be seen trudging homeward of a morning, bearing some choice and fresh-looking, and hard-bargained-for herrings dangling from a string by the gills. The old and massive Broomielaw bridge with all its architectural garnishings, has been taken down, and the handsome structure represented in our engraving erected in its place. It has recently been extended to 3,340 feet in length, while that on the south bank is 1,260 feet.

Glasgow took its rise as a dependency of the cathedral of the bishops (latterly archbishops) of the see bearing its name. It was not, however, till long after the reformation, that it became a seat of considerable population. About the middle of the eighteenth century, it had acquired a considerable share of the import colonial trade, which it still retains; but, during the last seventy years, it has chiefly been distinguished as a seat of manufactures. The weaving of lawns, cambrics, and similar articles, commenced in Glasgow in 1725. The advantages enjoyed by the city for the importation of cotton, in time gave a great impulse to that species of manufacture. In 1834, out of 134 cotton-factories existing in Scotland, 100 belonged to Glasgow, and the importation of cot-

ton into that port amounted to 95,703 bales. In the weaving of this material, upward of 15,000 power-looms, and 32,000 hand-loom weavers, were at the same time employed by the manufacturers of Glasgow. Of calico-printing establishments there are upward of forty. It would be vain to attempt an exact enumeration of the less prominent features of the business carried on in Glasgow. The chief articles of importation, besides cotton, are sugar, rum, tea, tobacco, and timber. The chief articles manufactured or prepared, besides cotton goods, are sugar, soap, glass, iron, ropes, leather, chymical stuffs, and machinery. There were recently seven native banks, and several branches of other banks. During a year extending from a certain period in 1839, to a certain period in 1840, 5,484 vessels, of 296,302 tonnage, arrived at the Glasgow harbor; the customhouse revenue of 1839 was £468,975, and the harbor dues of the twelvemonth ending August 31 of that year were £35,826. It is worthy of remark, that the Clyde was the first river in the elder hemisphere on which steam navigation was exemplified. A steam-vessel of three-horse power was set afloat on the river in January, 1812, by Mr. Henry Bell of Helensburgh; and there were twenty such vessels on the Clyde before one had disturbed the waters of the Thames. In 1835, there were sixty-seven steam-vessels, of 6,691 aggregate tonnage, connected with Glasgow, eighteen of which plied to Liverpool, Belfast, Dublin, and Londonderry. Within the last few years, the city has become a great centre of the iron trade, this metal being produced in the neighborhood to an annual amount of not less than 200,000 tons. As a necessary consequence of the commerce and manufactures which flourish in Glasgow, the city has a vast retail trade in all the articles of luxury and necessity which are used by human beings. But no circumstance connected with Glasgow could give so impressive an idea of the height to which business has been carried in it, as the rapid advance and present great amount of its population. By the census of 1791, the inhabitants were 66,578; and by the first government census in 1801, they were 77,385. But these numbers have been

New B.oomiclaw Bril'ge, Glasgow.



increased in 1811, 1821, and 1831, respectively to 110,749, 147,043, and 202,426. As the increase is about 7,000 per annum, the present amount (1841) is supposed to be fully 285,000—a mass of population which, at the time of the union, could not have been dreamed of as likely ever to exist in any Scottish city.

The cathedral, or high church, is situated in the northern outskirts of the city, near the upper extremity of the High street. The bulk of the existing building was constructed at the close of the twelfth century, in place of another which had been consecrated in 1136, but was destroyed by fire. It consists of a long nave and choir, a chapter-house projecting from the northeast angle, a tower and spire in the centre, and a crypt extending beneath the choir or eastern portion of the building. In the nave, termed the outer high kirk, was held the celebrated general assembly of the church, November, 1638, by which episcopacy was abolished and pure presbytery replaced—the first great movement in the civil war.

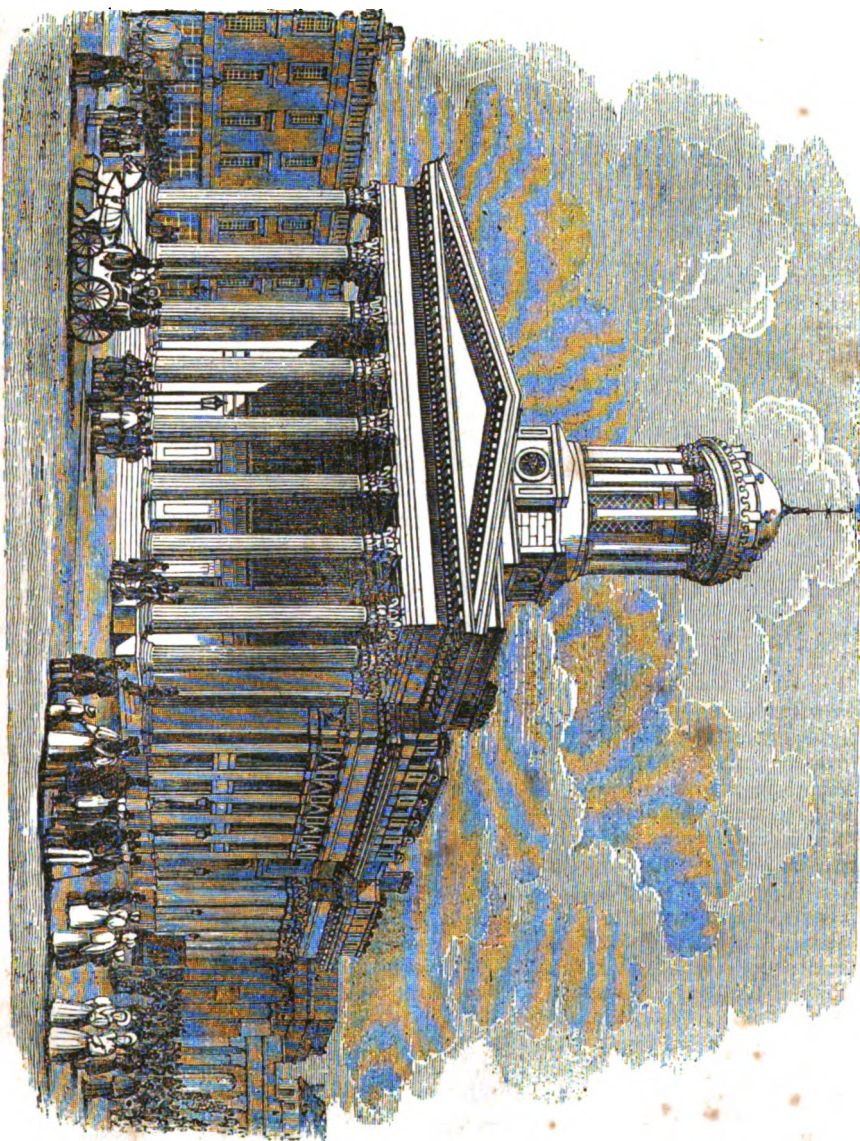
The elevated ground, near the east end of the cathedral, has been formed into an ornamental place of sepulture, under the appellation of the Necropolis. Since 1831, the society of merchants, its proprietors, have expended the sum of £6,000 in laying out about twenty-four acres of ground in walks and shrubberies, and in connecting the spot with the opposite slope by means of a bridge across the intermediate rivulet. The taste manifested in the whole scheme and in its execution, is extremely creditable to the city. The walks, several miles in extent, command an extensive view of the neighboring country. They are skirted by numberless sepulchral plots and excavations, where already affection has been busy in erecting its "frail memorials," all of which, it may be mentioned, are fashioned according to certain regulations, with a view to general keeping and effect.

The college buildings are situated on the east side of the High street, about half-way between the cathedral and the Tron-gate. They consist in a sort of double court; the front which adjoins to the street being 330 feet in length, and three stories in height. The whole edifice has

a dignified and venerable appearance. A large piece of ground behind the college is formed into a park or green, interspersed with trees and hedges, and always kept in grass, to be used by the students as a place of exercise or amusement. In the college there are appointed professors or teachers of about thirty branches of science, theology, and polite literature. At the back of the interior court stands the modern Grecian building which contains the Hunterian Museum. This is a large collection of singular natural objects, coins, medals, rare manuscripts, paintings, and relics of antiquity, originally formed by Dr. William Hunter, the celebrated anatomist, and bequeathed by him to this university, at which he received his education. While the college confers professional education, popular instruction is attainable, under unusually advantageous circumstances, through the medium of the Andersonian institution, an extensive school of science founded at the close of the last century, and connected with which there is a general museum, containing many curious objects, and constantly open to the public.

The most attractive modern building in Glasgow is the royal exchange in Queen street, a most superb structure, erected in 1829, as a point of assemblage for the merchants in the western part of the city. The principal room is a large hall, supported by a double row of columns, and used as a reading-room. The front of the exchange consists of a magnificent portico, surmounted by a cupola; and, as the building is isolated, the other sides are also of decorative architecture. The portico is 74 feet in width and 27 deep; and the body of the building is 177 feet by 71. The principal room is 93 feet by 62, and 36 high in the centre. Altogether, this building, supported by a set of very elegant domestic structures of similarly august proportions, impresses the mind of a stranger as something signally worthy of a great city.

Since the reform act of 1832, Glasgow has the privilege of returning two members to parliament. The places of worship, charitable institutions, and associations of various kinds for public objects, are very numerous. A laudable zeal for the improvement of education marks the



Glasgow Exchange.

city ; and a normal school, or seminary for the rearing of teachers—the first in the empire—has been erected under the auspices of a private society.

The means of communication in connexion with Glasgow, are suitable to the character of the city as one of the greatest emporia of commerce and manufacture in the world. Besides a river, navigable by vessels drawing fifteen feet of water, and which gives the means of a ready communication with the western shores of Britain, with Ireland, and with America, the Forth and Clyde canal, of which a branch comes to Port Dundas, in the northern suburbs, serves to convey goods and passengers to the eastern shores of the island, while canals of less note connect the city with Paisley and Johnstone in one direction, and with the great coal-fields of Monkland in the other. There is also a railway, which traverses the same great coal-field, by Garnkirk and Wishaw, and conveys passengers as well as coal and goods. Another railway, connecting the city with Kilmarnock, Ayr, and the port of Ardrossan, was opened in 1840. During the year 1841 a third railway, passing by Falkirk and Linlithgow to Edinburgh, was opened. Others are projected. The steam communication between Glasgow and Liverpool, Dublin, and other Irish ports, is conducted on a scale which may be called grand. The vessels are superb in magnitude, decoration, and power ; and they sail frequently and rapidly. The steam intercourse between Glasgow and various places in Scotland, both for passengers and objects of traffic, is also conducted on a great scale : among the places touched at in the Clyde and to the south are Greenock, Dunbarton, Dunoon, Rothesay, Arran, Gourock, Troon, and Ayr. Among the places to the north to which vessels sail regularly, are Inverary, Campbelton, Oban, Staffa, and Iona, Mull, Arisaig, Skye, Stornoway, and Inverness. In opening up markets for West Highland produce, and introducing luxuries in return, these vessels have also been of marked service, insomuch that the value of property in those hitherto secluded districts has experienced a considerable rise. The country around Glasgow abounds in busy towns and villages.

THE CONSTANCY OF NATURE AND FAITHFULNESS OF GOD.



HE constancy of nature is taught by universal experience, and even strikes the popular eye as the most characteristic of those features which have been impressed upon her. It may need the aid of philosophy to learn how unvarying nature is in all her processes—how even her seeming anomalies can be traced to a law that is inflexible—how what might appear at first to be the caprices of her waywardness, are, in fact, the evolutions of a mechanism that never changes—and that the more thoroughly she is sifted and put to the test by the interrogations of the curious, the more certainly will they find that she walks by a rule which knows no abatement, and perseveres with obedient footstep in that even course from which the eye of strictest scrutiny has never yet detected one hair-breadth of deviation. It is no longer doubted by men of science that every remaining semblance of irregularity in the universe is due, not to the fickleness of nature, but to the ignorance of man—that her most hidden movements are conducted with a uniformity as rigorous as fate—that even the fitful agitations of the weather have their law and their principle—that the intensity of every breeze, and the number of drops in every shower, and the formation of every cloud, and all the occurring alterations of storm and sunshine, and the endless shiftings of temperature, and those tremulous varieties of the air which our instruments have enabled us to discover, but have not enabled us to explain—that still they follow each other by a method of succession, which, though greatly more intricate, is yet as absolute in itself as the order of the seasons, or the mathematical courses of astronomy. This is the impression of every philosophical mind with regard to nature, and it is strengthened by each new accession that is made to science. The more we are acquainted with her, the more are we led to recognise her constancy ; and to view her as a mighty though com-

plicated machine, all whose results are sure, and all whose workings are invariable.

But there is enough of patent and palpable regularity in nature, to give also to the popular mind the same impression of her constancy. There is a gross and general experience that teaches the same lesson, and that has lodged in every bosom a kind of secure and steadfast confidence in the uniformity of her processes. The very child knows and proceeds upon it. He is aware of an abiding character and property in the elements around him—and has already learned as much of the fire, and the water, and the food that he eats, and the firm ground that he treads upon, and even of the gravitation by which he must regulate his postures and his movements, as to prove that, infant though he be, he is fully initiated in the doctrine that nature has her laws and her ordinances, and that she continueth therein. And the proofs of this are ever multiplying along the journey of human observation: insomuch, that when we come to manhood, we read of nature's constancy throughout every department of the visible world. It meets us wherever we turn our eyes. Both the day and the night bear witness to it. The silent revolutions of the firmament give it their pure testimony. Even those appearances in the heavens at which superstition stood aghast, and imagined that nature was on the eve of giving way, are the proudest trophies of that stability which reigns throughout her processes—of that unswerving consistency wherewith she prosecutes all her movements. And the lesson that is thus held forth to us from the heavens above, is responded to by the earth below; just as the tides of ocean wait the footsteps of the moon, and, by an attendance kept up without change or intermission for thousands of years, would seem to connect the regularity of earth with the regularity of heaven. But, apart from these greater and simpler energies, we see a course and a uniformity everywhere. We recognise it in the mysteries of vegetation. We follow it through the successive stages of growth, and maturity, and decay, both in plants and animals. We discern it still more palpably in that beautiful circulation of the element of wa-

ter, as it rolls its way by many thousand channels to the ocean—and, from the surface of this expanded reservoir, is again uplifted to the higher regions of the atmosphere—and is there dispersed in light and fleecy magazines over the four quarters of the globe—and at length accomplishes its orbit, by falling in showers on a world that waits to be refreshed by it. And all goes to impress us with the regularity of nature, which in fact teems, throughout all its varieties, with power, and principle, and uniform laws of operation—and is viewed by us as a vast laboratory, all the progressions of which have a rigid and unflinching necessity stamped upon them.

Now this contemplation has at times served to foster the atheism of philosophers. It has led them to deify nature, and to make her immutability stand in the place of God. They seem impressed with the imagination that had the Supreme Cause been a being who thinks, and wills, and acts as man does, on the impulse of a felt and a present motive, there would be more the appearance of spontaneous activity, and less of mute and unconscious mechanism in the administrations of the universe. It is the very unchangeableness of nature, and the steadfastness of those great and mighty processes wherewith no living power that is superior to nature, and is able to shift or to control her, is seen to interfere—it is this which seems to have impressed the notion of some blind and eternal fatality on certain men of loftiest but deluded genius. And, accordingly, in France, where the physical sciences have of late been the most cultivated, have there also been the most daring avowals of atheism. The universe has been affirmed to be an everlasting and indestructible effect; and from the abiding constancy that is seen in nature through all her departments, have they inferred that thus it has always been and that thus it will ever be.

But this atheistical impression that is derived from the constancy of nature is not peculiar to the disciples of philosophy. It is the familiar and the practical impression of every-day life. The world is apprehended to move on steady and unvarying principles of its own; and these sec-

ondary causes have usurped, in man's estimation, the throne of the Divinity. Nature, in fact, is personified into God: and as we look to the performance of a machine without thinking of its maker, so the very exactness and certainty wherewith the machinery of creation performs its evolutions, has thrown a disguise over the agency of the Creator. Should God interpose by miracle, or interfere by some striking manifestation of providence, then man is awakened to the recognition of him. But he loses sight of the Being who sits behind these visible elements, while he regards those attributes of constancy and power which appear in the elements themselves. They see no demonstration of a God, and they feel no need of Him, while such unchanging and such unfailing energy continues to operate in the visible world around them; and we need not go to the schools of ratiocination in quest of this infidelity, but may detect it in the bosoms of simple and unlettered men, who, unknown to themselves, make a god of nature, and just because of nature's constancy; having no faith in the unseen Spirit who originated all and upholds all, and that because all things continue as they were from the beginning of the creation.

Such has been the perverse effect of nature's constancy of the alienated mind of man: but let us now attend to the true interpretation of it. God has, in the first instance, put into our minds a disposition to count on the uniformity of nature, inasmuch that we universally look for a recurrence of the same event in the same circumstances. This is not merely the belief of experience, but the belief of instinct. It is antecedent to all the findings of observation, and may be exemplified in the earliest stages of childhood. The infant who makes a noise on the table with his hand for the first time, anticipates a repetition of the noise from a repetition of the stroke, with as much confidence as he who has witnessed for years together the unvariableness wherewith these two terms of the succession have followed each other. Or, in other words, God, by putting this faith into every human creature, and making it a necessary part of his mental constitution, has taught him at all

times to expect the like result in the like circumstances. He has thus virtually told him what is to happen, and what he has to look for in every given condition—and by its so happening accordingly, he just makes good the veracity of his own declaration. The man who leads us to expect that which he fails to accomplish, we would hold to be a deceiver. God has so framed the machinery of his perceptions, as that we are led irresistibly to expect that everywhere events will follow each other in the very train in which we have ever been accustomed to observe them—and when God so sustains the uniformity of nature, that in every instance it is rigidly so, he is just manifesting the faithfulness of his character. Were it otherwise, he would be practising a mockery on the expectation which he himself had inspired. God may be said to have promised to every human being that nature will be constant—if not by the whisper of an inward voice to every heart, at least by the force of an uncontrollable bias which he has impressed on every constitution. So that, when we behold nature keeping by its constancy, we behold the God of nature keeping by his faithfulness—and the system of visible things, with its general laws, and its successions which are invariable, instead of an opaque materialism to intercept from the view of mortals the face of the divinity, becomes the mirror which reflects upon them the truth that is unchangeable, the ordination that never fails.

Conceive that it had been otherwise—first, that man had no faith of the constancy of nature—then how could all his experience have profited him? How could he have applied the recollections of his past to the guidance of his future history? And what would have been left to signalize the wisdom of mankind above that of veriest infancy? Or suppose that he had the implicit faith in nature's constancy, but that nature was wanting in the fulfilment of it—that at every moment his intuitive reliance on this constancy was met by some caprice or waywardness of nature, which thwarted him in all his undertakings—that instead of holding true to her announcements, she held the children of men in most distressful uncertainty by the

freaks and the falsities in which she ever indulged herself—and that every design of human foresight was thus liable to be broken up, by ever and anon the putting forth of some new fluctuation. Tell us, in this wild misrule of elements changing their properties, and events ever fitting from one method of succession to another, if man could subsist for a single day, when all the accomplishments without were thus at war with all the hopes and calculations within. In such a chaos and conflict as this, would not the foundations of human wisdom be utterly subverted? Would not man, with his powerful and perpetual tendency to proceed on the constancy of nature, be tempted at all times, and by the very constitution of his being, to proceed upon a falsehood? It were the way, in fact, to turn the administration of nature into a system of deceit. The lessons of to-day would be falsified by the events of to-morrow. He were indeed the father of lies who could be the author of such a regimen as this—and well may we rejoice in the strict order of the goodly universe which we inhabit, and regard it as a noble attestation to the wisdom and beneficence of its great Architect.

RATIONAL RELIGION.

WHAT is true and rational religion? In answering this important question, we shall come to the point at once, without prejudice or sectarian influence; and laying aside all traditionary superstition, inquire what is *now* the will of the blessed Deity, with regard to the conduct of the children of men. What course of conduct, in us, frail, erring human creatures will *now*, under all the present existing circumstances, be acceptable and approved by our divine Creator, who continually watches over us, and observes our every act, and the thoughts of our hearts? We have so diligently examined the answer which we are now about to give to these questions, and so attentively viewed the subject in all its bearings, and with all its evidences and demonstrations, that we can not think it possible that there is any ground to doubt its correctness. First, then, let us, as

rational creatures, be ever ready to acknowledge God as our Creator and daily Preserver; and that we are each of us individually dependent on his special care and good will toward us, in supporting the wonderful action of nature which constitutes our existence; and in preserving us from the casualties, to which our complicated and delicate structure is liable. Let us also, knowing our entire dependence on Divine Benevolence, as rational creatures, do ourselves the honor to express personally and frequently, our thanks to him for his goodness; and to present our petitions to Him for the favors which we constantly require. This course is *rational*, even without the aid of revelation: but being specially invited to this course, by the divine word, and assured of the readiness of our Creator to answer our prayers and recognise our thanks, it is truly surprising that any rational being who has ever read the inspired writings, should willingly forego this privilege, or should be ashamed to be seen engaged in this rational employment, or to have it known that he practises it. Next to the worship of God by thanksgiving and prayer, we should repel and banish all feelings of anger and bitterness toward our fellow-beings, and cherish love and kind feelings toward them. This course is also rational, having the example of God in his kind dealings toward us; and conduces at once, to the glory of God, the happiness of mankind in general, and to our own individual happiness and prosperity in particular. It is a rational duty to be ever reconciled and resigned to the dispensations of Divine Providence; and to trust in the goodness and benevolence of God for the present and future, and to feel willing to have it known among our associates, that we follow a rational course. This is rational religion.

MEXICO.

THE natural resources of Mexico are immense, hardly surpassed by any country in the world. With a low coast, and alluvial bottoms, the interior of the country rises into vast plains, or steppes, at a height greater than that of the highest

mountains of our states, and yet fertile, temperate, and although much of it within the tropics, having a climate capable of yielding the vegetable productions of Burgundy, in France, or of Devonshire, in England. One day's journey, says Humboldt, will take the traveller from the suffocating atmosphere of the coast, to the region of eternal snow. Its greatest inconvenience and disadvantage is that of very shallow harbors; a disadvantage which extends to the whole of Texas, and is a great barrier in the way of commerce.

The part of Mexico which is most thickly inhabited—that is the southern extremity—is rich in soil and mines, and capable of supporting as dense a population as any country in Europe. The population is of a very mixed character, being, as some affirm, three fifths Indian, or a mixture of Spanish and Indian blood. The character of the inhabitants, even in the city of Mexico, itself, will not compare favorably with any country in Europe in point of civilization—still there is something of the nobleness of the Indian character to be found, but more of the treachery of the Spaniard.

The following is a list of the principal cities with something like the number of inhabitants in each:—

Mexico,	185,000
Puebla,	72,000
Guanaxuato,	60,000
Guadalajara,	45,000
Chihuahua,	45,000
Oaxoco,	40,000
San Louis Potosi,	20,000
Zacatecas,	23,000

The city of Mexico is represented as a place of great splendor, and containing more wealth in gold and silver than any other city of equal inhabitants, on the globe. Most of the wealth, however, is under the control of catholic priests.

The seaports are small—Vera Cruz being the largest, and that contains only about 15,000 inhabitants. Campeachy, the next seaport of importance, contains about 6,000. Acapulco and Tampico are the remaining seaport towns; the former contains about 5,000 inhabitants, and the latter about 3,000. In the province of California, however, are several towns on

the coast, Monterey being the only one of much importance. The revenue of the country is \$15,000,000 per annum, and her national debt amounts to \$94,000,000, so that after paying her annual interest, she has for the support of the army and for the purposes of government, about \$10,000,000 active funds.

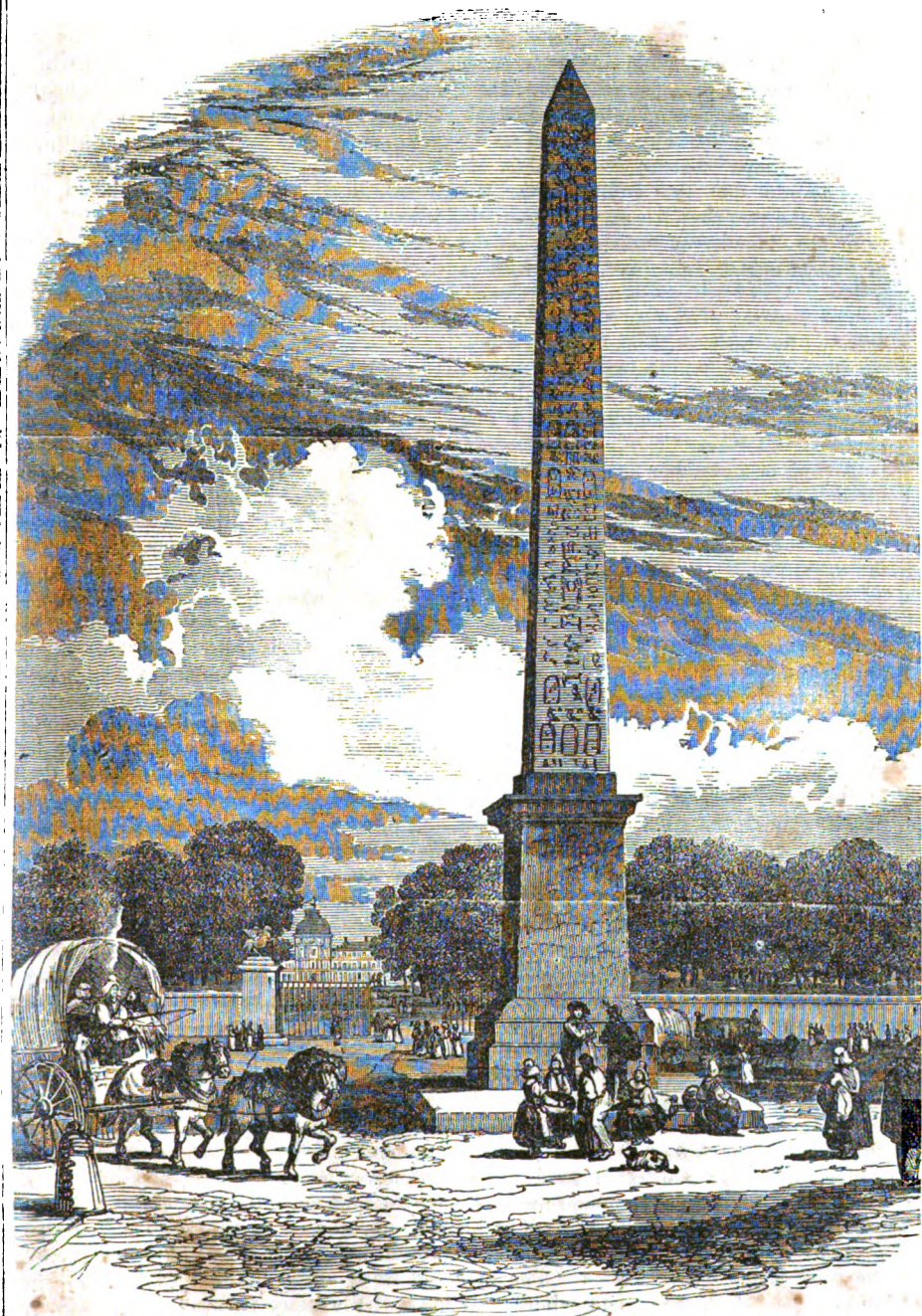
THE LUXOR OBELISK, IN THE PLACE LOUIS XVI., PARIS.



HE smaller of the two obelisks of Luxor, is now erected on one of the most remarkable sites of Paris—the scene of many of those tragedies which marked that most extraordinary period of modern history—the first French revolution.

The space called the Place Louis XVI. lies between the gardens of the Tuileries and the avenue or road, thickly planted on each side with tall shady trees, which is called the Champs Elysées, or Elysian Fields—a rather high-sounding appellation, for the walks under these trees are far inferior to the walks in the gardens of the palace, of which a partial view is given in our engraving.

A ship, which was constructed expressly for the conveyance of the obelisk, sailed from Toulon in March, 1831, and arrived at Thebes in the heat of summer. The first operation of the French on their arrival was to clear the lower part of the obelisks, which was buried to a considerable depth. Both the obelisks are in a state of perfect preservation: the larger is about 80 English feet high, and the other about 76 feet. To conceal this difference, the smaller obelisk had been placed on a higher pedestal than the other, and somewhat in advance of it. Three vertical rows of hieroglyphics cover the faces of both obelisks: the middle row is cut nearly six inches deep; the two others are scarcely cut into the stone. This difference in the sculpture varies the reflection and the shadows. The pedestal



Obelisk of Luxor, Place Louis XVI, Paris.

which was uncovered by the French, contains on the northeast and southwest faces respectively four cynocephali, which have on the chest the cartouche that is considered to contain the name of Ramesses.

It is perhaps correctly remarked by M. de Laborde that the difference in the size of the two obelisks may have arisen from the difficulty of finding two blocks of granite of the same dimensions without a flaw.

The smaller of the two obelisks was selected by the French as being in a better state of preservation, and also lighter than the other; and yet the smaller is calculated to weigh about 246 tons. The obelisk was lowered by very simple means, consisting of an anchor firmly fixed in the ground, a long beam of wood, and a few ropes and pulleys: the whole obelisk remained suspended for two minutes, during the operation of lowering it at an angle of 32 degrees. It was safely conveyed to Paris.

It was erected in the Place Louis XVI. during the summer of 1836. It was exposed to some danger during the operation, not from the want of care or skill in raising it, but from a very different cause. "The Paris archæologists," says a newspaper of the time, "are so rapacious that two guards placed round the obelisk of Luxor were not sufficient to protect the top, which was left uncovered. In spite of the penalties of the law, which are extremely severe, several fragments were broken off, and pieces not the size of a hazel-nut sold for two guineas each. It was found necessary to cover the monument entirely to save it from these Vandals." When all the preparations were completed, the obelisk was safely raised on the 25th October, the king and royal family witnessing the operation from the Hôtel de la Marine, Place de la Concorde.

French words are often used where English words might be found more expressive; but in the present instance the phrase *coup d'œil* is a good description of the view from the Tuileries. The eye looks down the noble vista where this fine remnant of ancient Egyptian art and opulence now stands, in the centre of that spot which was literally the "field of blood" of an awful time. Beyond it is

the road running through the Champs Elysées, ascending the gentle slope which is crowned by the triumphal arch begun by Napoleon, who died a prisoner and an exile, and finished by Louis Philippe, who saw the commencement of that revolution in which his father perished, and which drove himself to wander over Europe; and who has now become, by a second revolution, king of France.

MOUNTAINS.



HERE is a charm connected with mountains so powerful that the merest mention of them, the merest sketch of their magnificent features, kindles the imagination, and carries the spirit at once into the bosom of their enchanted regions. How the mind is filled with their vast solitude! how the inward eye is fixed on their silent, their sublime, their everlasting peaks! How our heart bounds to the music of their solitary cries—to the tinkle of their gushing rills! to the sound of their cataracts—how inspiring are the odors that breathe from the upland turf, from the rock-hung flower, from the hoary and solemn pine! how beautiful are those lights and shadows thrown abroad, and that fine transparent haze which is diffused over the valleys and lower slopes, as over a vast, inimitable picture!

The heat of summer has dried up the moisture with which winter rains saturate the spongy turf of the hollows; and the atmosphere, clear and settled, admits of the most extensive prospects. Whoever has not climbed the long and heathy ascents, and seen the trembling mountain flowers, the glowing moss, the richly-tinted lichens at his feet; and scented the fresh aroma of the uncultivated sod, and of the spicy shrubs; and heard the bleat of the flock across their solitary expanses, and the wild cry of the mountain birds, the raven, or the eagle; and seen the rich and russet hues of distant slopes

and eminences, the livid gashes of ravines and precipices, the white glittering line of falling waters, and the cloud tumultuously whirling round the lofty summit; and then stood panting on that summit, and beheld the clouds alternately gather and break over a thousand giant peaks and ridges of every varied hue—but all silent as images of eternity; and cast his gaze over lakes and forests, and smoking towns, and wide lands to the very ocean, in all their gleaming and reposing beauty, knows nothing of the treasures of pictorial wealth which mountains possess.

But when we let loose the imagination from even these splendid scenes, and give it free charter to range through the glorious Alps, Apennines, or Andes, how is it possessed and absorbed by all the awful magnificence of their scenery and character! The sky-ward and inaccessible pinacles, the—

*"Palaces where nature thrones
Sublimity in icy halls!"*

the dark Alpine forests, the savage rocks and precipices, the fearful and unfathomable chasms filled with the sound of ever-precipitating waters; the cloud, the silence, the avalanche, the cavernous gloom, the terrible visitations of heaven's concentrated lightning, darkness, and thunder; or the sweeter features of living, rushing streams, spicy odors of flower and shrub, fresh spirit-elating breezes sounding through the dark pine grove; the ever-varying lights and shadows and aerial hues; the wide prospects, and, above all, the simple inhabitants.

We delight to think of the people of mountainous regions; we please our imaginations with their picturesque and quiet abodes; with their peaceful, secluded lives, striking and unvarying costumes, and primitive manners. We involuntarily give to the mountaineer heroic and elevated qualities. He lives among noble objects, and must imbibe some of their nobility; he lives among the elements of poetry, and must be poetical; he lives where his fellow-beings are far, far separated from their kind, and surrounded by the sternness and the perils of savage nature; his social affections must, therefore, be proportionately concentrated, his home feelings lively and strong; but, more than all, he lives with-

in the barriers, the strongholds, the very last refuge which Nature herself has reared to preserve alive liberty in the earth, to preserve to man his highest hopes, his noblest emotions, his dearest treasures—his faith, his freedom, his hearth, and home. How glorious do those mountain-ridges appear when we look upon them as the unconquerable abodes of free hearts; as the stern heaven-built walls from which the few, the feeble, the persecuted, the despised, the helpless child, the delicate woman, have from age to age, in their last perils, in all their weaknesses and emergencies, when power and cruelty were ready to swallow them up, looked down, and beheld the million waves of despotism break at their feet—have seen the rage of murderous armies, and tyrants, the blasting spirit of ambition, fanaticism, and crushing domination, recoil from their bases in despair. "Thanks be to God for mountains!" is often the exclamation of our heart, as we trace the history of the world. From age to age, they have been the last friends of man. In a thousand extremities they have saved him. What great hearts throbbed in their defiles from the days of Leonidas to those of Andreas Hofer! What lofty souls, what tender hearts, what poor and persecuted creatures have they sheltered in their stony bosoms from the weapons and tortures of their fellow-men!—

*"Avenge, O Lord, thy slaughtered saints, whose bones
Lie scattered on the Alpine mountains cold!"*

was the burning exclamation of Milton's agonized and indignant spirit, as he beheld those sacred bulwarks of freedom for once violated by the disturbing demons of the earth; and the sound of his fiery and lamenting appeal to heaven will be echoed in every generous soul to the end of time.

Thanks be to God for mountains! The variety which they impart to the glorious bosom of our planet were no small advantage; the beauty which they spread out to our vision in their woods and waters, their crags and slopes, their clouds and atmospheric hues, were a splendid gift; the sublimity which they pour into our deepest souls from their majestic aspects; the poetry which breathes from their streams, and dells, and airy heights, from the sweet abodes, the garbs and manners

of the inhabitants, the songs and legends which have awoke in them, were a proud heritage to imaginative minds; but what are all these when the thought comes, that without mountains the spirit of man must have bowed to the brutal and the base, or sunk to the monotonous level of the plain.

When we turn our eyes upon the map of the world, and behold how wonderfully the countries where our faith was nurtured, where our liberties were generated, where our philosophy and literature, the fountains of our intellectual grace and beauty sprang up, were as distinctly walled out by God's hand with mountain ramparts from the eruptions and interruptions of barbarism, as if at the especial prayer of the early fathers of man's destinies, we are lost in an exulting admiration. Look at the bold barriers of Palestine! see how the infant liberties of Greece were sheltered from the vast tribes of the uncivilized north by the heights of Hæmus and Rhodope! behold how the Alps describe their magnificent crescent, inclining their opposite extremities to the Adriatic and Tyrrhine seas, locking up Italy from the Gallic and Teutonic hordes till the power and spirit of Rome had reached their maturity, and she had opened the wide forest of Europe to the light, spread far her laws and language, and planted the seeds of many mighty nations!

Thanks be to God for mountains! Their colossal firmness seems almost to break the current of time itself; the geologist in them searches for traces of the earlier world; and it is there too that man, resisting the revolutions of lower regions, retains, through innumerable years, his habits and his rights. While a multitude of changes has remoulded the people of Europe, while languages, and laws, and dynasties, and creeds, have passed over it like shadows over the landscape, the children of the Celt and the Goth, who fled to the mountains a thousand years ago, are found there now, and show us in face and figure, in language and garb, what their fathers were; show us a fine contrast with the modern tribes dwelling below and around them; and show us, moreover, how adverse is the spirit of the mountain to mutability, and that there the fiery heart of freedom is found for ever.

METAPHYSICS OF BUSINESS.



WE hear much of various circumstances affecting business in this busy country, but few ever dream of its being liable to one influence, greater perhaps than all the rest put together—the workings of human nature.

In the opening of the year, there is an excitement of the hopeful and cheerful sentiments, under which we are more disposed to speculation and adventure. The decline of the year, on the contrary, raises melancholy and timorous sentiments; we then feel inclined to draw into our shells and wait for brighter days: speculation has no charms for us. In the one case we are under the influence of hope; in the other, of cautiousness. It would almost, indeed, appear as if we were, in this respect, subject to laws similar to those which affect birds and other lower animals, causing them to exhibit no active industry except in spring. It is only when we have a future bright before us, that our energies are fully roused.

These feelings are seen exercising a most potent control over the state of markets, and in all adventurous kinds of business. These things are notably oscillatory; and this is simply because hope and cautiousness take command over us in an alternating manner. The natural procedure of the two feelings is this; for a time after an experience of evil or a threat of danger, cautiousness is predominant. Gradually, after a cessation of these experiences, we forget them. Cautiousness is lulled; hope and confidence again awaken; and these go in increasing activity, till danger and evil once more supervene, and then they give way in a moment to revived cautiousness. Thus it is that for some time after such a "crash" as that of 1837, speculations are held in universal dread; so that even a really promising one would be shunned. But by-and-by the sufferings and losses are forgotten. Men begin to touch and taste, and finding no immediate harm, they at length take whole mouthfuls. Hope gets into full

commission, *vice* cautiousness retired, and then we see the most visionary schemes eagerly embraced, where recently the most plausible and prudent would have been repudiated. A "crash," with its distressing consequences in the ruin of individuals, and embarrassment of general business, finally lays hope once more so completely prostrate, that for years men can not be induced to venture even on the fairest chances. The rise or fall of prices in all affairs admitting of the least speculation, is governed by the same principle. A little rise from just causes excites hope, under whose influence a further and unwarranted rise takes place. While the progress in this direction remains unchecked by any external cause, all is sanguine expectation in the mercantile mind. No one seems to have the least conception of a possible reverse. Everybody wishes to buy from everybody. Reason has nothing to do with it: it is a mere sentiment which is at work. But let the slightest prognostic of a *turn* come into view, and in an instant the hopeful feeling sinks like a punctured wind-bag. A panic supervenes, and things never rest till they are as much below the fair and reasonable point as they were formerly above it. Have we not here, also, nearly the whole philosophy of what are called "bad times?" Manufacturers go on for a while producing a particular article with the greatest diligence, as if they believed that mankind were in danger of some tremendous inconvenience for want of it. This enthusiasm in (we shall say) cotton finds at length a slight check. In an instant the manufacture ceases, the works are stopped, the workmen are thrown idle. For months there seems to reign over the country a dreary conviction that mankind are never to require cloth any more. Now it was neither true at first that mankind were in any pressing need of particular goods, nor that now they have abjured all further use of them. They use them in a regular monotonous manner, and will evermore do so. The irregularity is in the mental impulses of the producers. These men happen to regard their wares with alternative paroxysms of hope and despair. The consequence is that at one time a factory is put to top speed, and the

workmen are tempted by high wages to exceed the proper hours of labor, in order to produce a good deal more cloth than the public has immediate use for, while at another, the whole system is laid utterly idle because men somehow feel a heavy market as an indication that the world is at an end. Hence arise most important results in our social economy.

How absurd to suppose business men to be prosaic and over-sober of mind! They are the greatest sentimentalists that breathe.

We must now consider another portion of our subject.

Accustomed as we are in this country to see almost every person engaged in some kind of business or craft, we are apt to suppose it the natural and ordinary state of mankind. But some nations that are by no means uncivilized work extremely little. The Turks, for example, are an indolent people. Powerless, handless, they spend the whole day in perfect vacuity, apparently never giving themselves the least concern about the means of subsistence. And yet, somehow, the Turks live. All the people along the south of Europe are comparatively inert. The *Dolce Far Niente* is the prevalent taste of the Mediterranean nations. The striking distinction of the Englishman and American in this respect seems to be in a certain anxiety about the welfare of himself and his family. He starts in life with an awful sense of the necessity of getting on in the world. He will, with the greatest coolness, commence a business which he knows will require his being a daily and nightly slave for thirty years, undreaming that he is making any extraordinary sacrifice. He sees ages of bill-troubles before him, but looks upon it all as a matter of relentless destiny. Even when the first claims of his sense of duty have been fulfilled, and he knows he is safe from poverty for life, he works on for the love of working, rather than walk into a system of idleness which would present to him no enjoyable advantages. Now, who ever heard, in the literature or history of any nations away from central Europe and the United States, of such a thought predominating among them as the necessity of getting on in the

world? They are not, in general, altogether idle. They till, and weave, and fabricate, in a way which seems to be sufficient for their wants; but they are totally unacquainted with that system of close and incessant toiling after increase of goods, which appears to be the first law of existence among us. It must also be remembered that we know of the world having existed for centuries upon centuries, before it exhibited *anywhere* an example of this passionate attachment to workshop, counter, and desk. There was no shop-keeping worth speaking of in ancient Greece or Rome. Factories existed not among the Ptolemies. While the crusades swept across Europe, there were few men calling themselves merchants in London, Paris, or Venice. It is since the close of the middle ages that men have raised into vogue the idea that business is the sheet-anchor of individuals and of nations. There is thus a great difference from past time to present, as well as from other nations to us. This shows fully, we think, that business is not a thing necessary or unavoidable to our human nature. It can be no special result of certain faculties which have no other purpose or mode of action. Yet this is what we might suppose, if we were to see nothing in business but the gratification of the working or fabricating faculty, and of the love of gain. It therefore appears that the love of action and excitement, is what chiefly animates the hard-working nations, being the same impulse which once gratified men in war and in the chase, and still leads the born wealthy to the turf and the gaming-club. It is but the phase in which the mass of manly power and endowment appears in modern civilized nations. And accordingly trade has its heroes and conquerors as well as history.

The view which we are disposed to take respecting the benevolence of business, accords with this idea as to their main ends being, after all, but the gratification of certain mental faculties. To appearance there is nothing but selfishness regarded in business, and if the pursuit of his own end by each individual conduces, as Adam Smith endeavors to show, to the general weal, it is no praise to the motives of particular parties. But the worship of

fortune in reality involves no necessary subjection of the heart to selfishness. The fact is, that where business exists on a considerable scale, its votaries act under two opposite and apparently irreconcilable principles: in purely business matters, they are keen and inflexible, ever disposed to exact the whole of their rights; in domestic and social matters, they may be at the same time bountiful and conceding to a surprising degree. Meet them upon a bargain, and you would think them stern, and wrapped up in views of their own interest. See them next day in private, and you discover that they use their wealth with a generosity that shows they are far from loving it for its own sake. We have here a consideration which seems to take much from the force of those writings which hold up the present as an age of Mammon-worship. The following of Mammon is a fact in itself; but it ought to be taken in connexion with other circumstances, by which its effects are much modified. Our ruling *competitive* principle unquestionably calls out emulation and worse passions; but these are softened by the humanity and largeness of soul which are conspicuous features of the mercantile mind in all above the struggling classes. We are not, let it be fully understood, inclined to believe that the present plan is the best conceivable for the subsistence of nations. We thoroughly believe that, in time, such great bodies of people will feel and act more as only a large kind of families, and enjoy almost, if not altogether, in common the fruits of the general industry, finding that thereby they realize greater enjoyments than are to be obtained by each standing upon his individual acquisitiveness. All this may be unhesitatingly admitted, and yet we will say that the present system is far less selfish than is generally supposed, seeing that selfishness is the rule only in a certain routine of transactions so monotonous as almost to be a complete abstraction, while the kindly social affections in reality prevail over, and give character to the ordinary demonstrations of the individual.

We have here merely broken ground in a subject which appears to us to possess great interest. We willingly leave to oth-

ers to investigate it more deeply, and place the matter in all the various lights in which it may be contemplated. Meanwhile, some of these speculations may be brought home to men's bosoms. It is very obvious that the interests of a vast body of people—of that class generally who live by labor—are involved to a serious extent in a briskness and dulness of business. It is of importance for them to be aware that, so long as the competitive mode endures, the amount of their incomes, and even the question whether they shall have an income at all or not, depend upon the extent to which the faculty of hope is active in the brains of the employing class. So long as employers are sanguine as to markets and results of mercantile combinations, the horde of the industrious are safe; let the tide turn—and its ebb is as sure as its flow—and a large proportion of this huge multitude must cease to be employed. The fact of hundreds of thousands of people being thus withheld at any time from a penury verging upon and often trenching upon pauperism, only by the afflatus of an accidental sentiment in the minds of another portion of the community, is one of those great problems of modern times at which the wisest are the most apt to stand aghast. It is surely by no means creditable to our national sagacity, that we should contentedly see times of prosperity thus go on to the inevitable breakdown, when thousands upon thousands are sure to be thrown into misery, and yet believe it all to be in the fair and proper course of things. No provision by the industrious themselves for the day of certain evil; no arrangement by the sage and politic for softening the blow when it comes; no lesson for the future taken from the past; and, above all, no whispered alarm into any mind as to the soundness of the social plans which involve such tremendous calamities. Verily, we are yet children acting upon our first instincts, and the manhood of man—the time of reason and true brotherly kindness—seems yet far off.

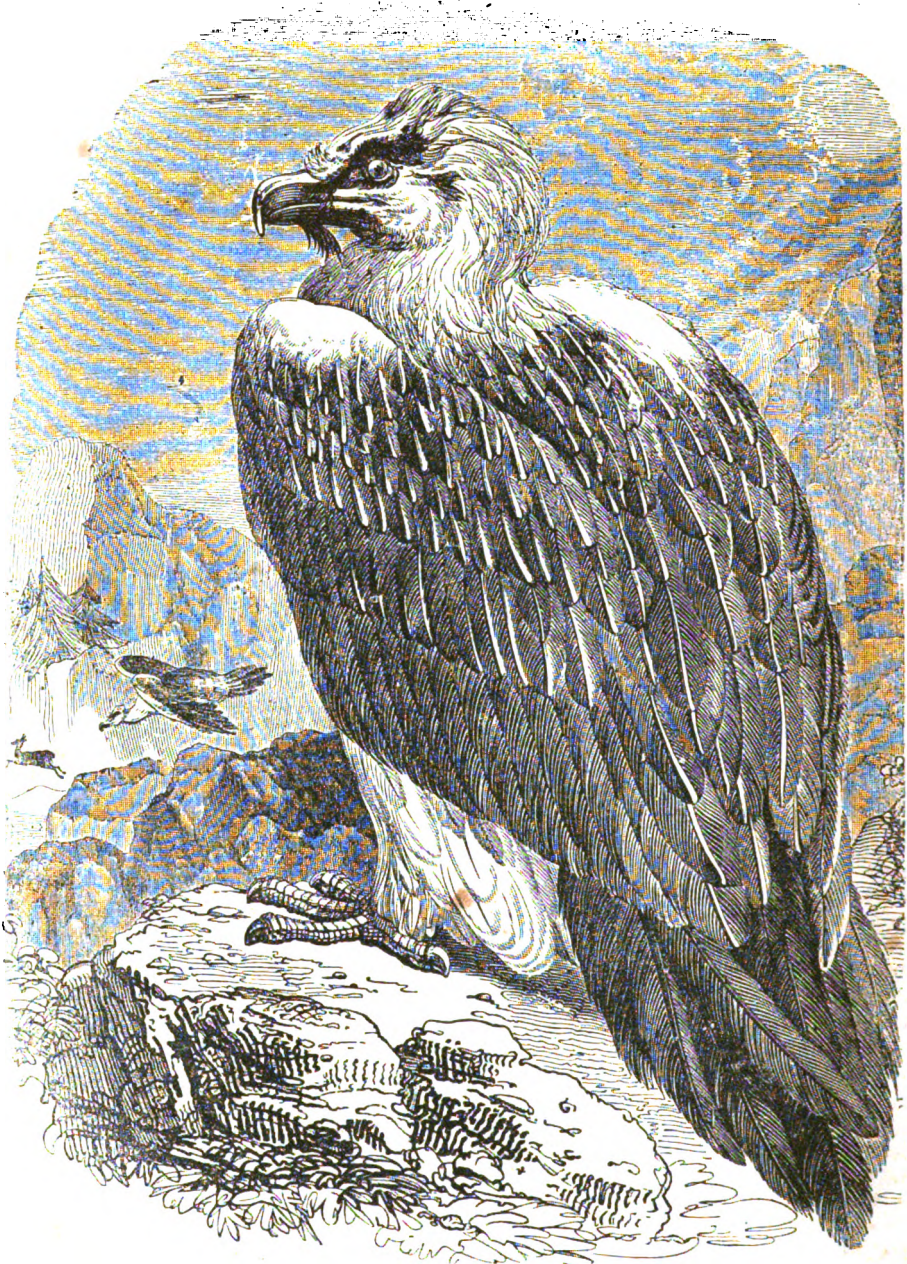
THE greatest and the most amiable privilege which the rich enjoy over the poor, is that which they exercise the least—the privilege of making them happy.

THE LÄMMERGEYER, OR BEARDED VULTURE.



HIS fine bird, which equals or exceeds the largest eagle in size, is found throughout the whole of the great mountain chains of the Old World, being in fact, though not anywhere numerous, very widely dispersed. It occurs in the Pyrenees, and in the Alps of Germany, and Switzerland, where it is notorious for its destructiveness among the lambs and kids which are fed on the green slopes of the lower ranges.

The intermediate situation assigned to the Lämmergeyer, and which is aptly expressed in the generic appellation *gypætus* (a Greek compound designating a vulture and an eagle), is clearly indicated in its form and general habits. Of a powerful and robust make, it has neither the bill nor the talons of the eagle, the former being elongated, and hooked only at the top, and the latter comparatively small and feeble; nor has it an exclusive appetite for blood, carrion and putrid animals being greedily devoured by it. The eagle bears off his prey—the Lämmergeyer seldom attempts to remove it, but devours it on the spot; indeed, his grasp is too feeble to permit him to manage effectually any but a trifling weight. Attracted by the carcass of some unfortunate animal which has perished among the ravines of the mountains, a number of these birds gradually congregate to share the booty, and gorge like the vulture to repletion. The Lämmergeyer, however, does not confine himself to putrid flesh, but attacks lambs, kids, and the weak and sickly of the flocks with great ferocity; the strong-limbed chamois is not secure, nor when rendered desperate by hunger will the ravenous bird forbear an attack on man. Children, indeed, are said to have often fallen sacrifices to its rapacity. Young or small animals are easily destroyed, for though elongated, the beak is hard and strong, and well adapted for lacerating the victim; but larger animals, instead of being at once grappled with, are, as it is said, insidiously assailed while upon the edge



The Lammergeyer, or Bearded Vulture.

of some precipice or steep declivity, the bird unexpectedly sweeping upon them with fury, and hurling them into the abyss down which it plunges to glut its appetite. As illustrative of the boldness of the lämmergeyer, Bruce relates that, attracted by the preparations for dinner, which his servants were making on the summit of a lofty mountain, a bearded vulture slowly made his advances to the party, and at length fairly seated himself within the ring they had formed. The affrighted natives ran for their lances and shields, and the bird, after an ineffectual attempt to abstract a portion of their meal from the boiling water, seized a large piece in each of his talons from a platter that stood by, and carried them off slowly along the ground as he came. Returning in a few minutes for a second freight he was shot.

There is little in the general aspect of this bird to remind one of the vulture, and yet the character of the head, and the general contour of the body, are strikingly different from those of the eagle; there is a want of dignity and quiet grandeur in its attitude, and the glance of its red eye, though keen and cruel, is deficient in that expression of daring and resolution which we admire in the feathered monarch. The bristly beard which depends from the lower mandible, tends also to give a peculiar character to its physiognomy. Of the nidification of the lämmergeyer little is ascertained, except that it selects the most inaccessible pinnacles as the site of its eyry; Pallas states that it is known to breed on the high rocks of the great Altaic chain, and beyond the lake Baikal.

In length this extraordinary bird measures about four feet from the bill to the end of the tail, and from nine to ten in the expanse of its wings. Larger admeasurements have been given by various writers, which are probably exaggerated—none of the numerous specimens which we have seen exceeding our statement.

The tarsi are short and almost hidden by the feathers of the thighs; the iris is bright red; the wings are ample, the second and third quill feathers being the longest; the tail is graduated; the head is clothed with feathers, and from the sides of the under mandible proceeds a

row of black bristles, which form a beard or pencil, at its angle, and a layer of similar bristles, beginning at the eye, covers the nostrils. The general color of the upper surface is dark grayish brown, the centre of each feather having a longitudinal dash of white. The neck and the whole of the under surface are white, tinted with reddish brown. The young birds are darker in the general hue of their plumage than the adult, and the white spots are larger and less defined; in this stage it has been mistaken for a distinct species.

NOVEMBER.



NOVEMBER, like the two preceding months, is derived from two Latin words, when its station in the Roman calendar rendered its derivation more appropriate: by the Saxons it was termed *Wint-monat*, in allusion to the winds that frequently prevail at this season.

As the preceding month was marked by the change, so this is distinguished by the fall of the leaf. This last is so striking a circumstance, that the whole declining season of the year is often, in common language, named the fall. There is something extremely melancholy in this gradual process, by which the trees are stripped of all their beauty, and left so many monuments of decay and desolation. The first of poets has deduced from this quick succession of springing and falling leaves, an apt comparison for the fugitive races of men:—

"Like leaves on trees the race of man is found,
Now green in youth, now withering on the ground.
Another race the following spring supplies;
They fall successive, and successive rise;
So generations in their course decay;
So flourish these, when those are passed away."

POPE'S HOMER.

This loss of verdure, together with the shortened days, the diminished warmth, and frequent rains, justify the title of the gloomy month of November: and other animals seem to sympathize with man in feeling it as such.

DEATHS OF LITTLE CHILDREN.



GRECIAN philosopher being asked why he wept for the death of his son, since the sorrow was vain, replied, "I weep on that very account." And

his answer became his wisdom. It is only for sophists to pretend that we whose eyes contain the fountains of tears need never give way to them. It would be unwise not to do so on some occasions. Sorrow unlocks them in her balmy moods. The first bursts may be bitter and overwhelming; but the soil on which they pour, would be worse without them. They refresh the fever of the soul—the dry misery which parches the countenance into furrows, and renders us liable to our most terrible "flesh-quakes."

There are sorrows, it is true, so great, that to give them some of the ordinary vents is to run a hazard of being overthrown. These we must rather strengthen ourselves to resist, or bow quietly and drily down in order to let them pass over us, as the traveller does the winds of the desert. But where we feel that tears would relieve us, it is false philosophy to deny ourselves at least that first refreshment; and it is always false consolation to tell people that because they can not help a thing, they are not to mind it. The true way is to let them grapple with the unavoidable sorrow, and try to win it into gentleness by a reasonable yielding. There are griefs so gentle in their very nature, that it would be worse than false heroism to refuse them a tear. Of this kind are the deaths of infants. Particular circumstances may render it more or less advisable to indulge in grief for the loss of a little child; but, in general, parents should be no more advised to repress their first tears on such an occasion, than to repress their smiles toward a child surviving, or to indulge in any other sympathy. It is an appeal to the same gentleness; and such appeals are never made in vain. The end of them is an acquittal from the

harsher bonds of affliction—from the tying down of the spirit to one melancholy idea.

It is the nature of tears of this kind, however strongly they may gush forth, to run into quiet waters at last. We can not easily, for the whole course of our lives, think with pain of any good and kind person whom we have lost. It is the divine nature of their qualities to conquer pain and death itself; to turn the memory of them into pleasure; to survive with a placid aspect in our imaginations. We are writing at this moment just opposite a spot which contains the grave of one inexpressibly dear to us. We see from our window the trees about it, and the church spire. The green fields lie around. The clouds are travelling over head, alternately taking away the sunshine and restoring it. The vernal winds, piping of the flowery summer-time, are nevertheless calling to mind the far-distant and dangerous ocean, which the heart that lies in that grave had many reasons to think of. And yet the sight of this spot does not give us pain. So far from it, it is the existence of that grave which doubles every charm of the spot; which links the pleasures of our childhood and manhood together; which puts a hushing tenderness in the winds, and a patient joy upon the landscape; which seems to unite heaven and earth, mortality and immortality, the grass of the tomb and the grass of the green field, and gives a more maternal aspect to the whole kindness of nature. It does not hinder gayety itself. Happiness was what its tenant, through all her troubles, would have diffused. To diffuse happiness, and to enjoy it, is not only carrying on her wishes, but realizing her hopes; and gayety, freed from its only pollutions, malignity and want of sympathy, is but a child playing about the knees of its mother.

The remembered innocence and endearments of a child stand us instead of virtues that have died older. Children have not exercised the voluntary offices of friendship; they have not chosen to be kind and good to us, nor stood by us from conscious will in the hour of adversity. But they have shared their pleasures and pains with us as well as they could; the

interchange of good offices between us has, of necessity, been less mingled with the troubles of the world; the sorrow arising from their death is the only one which we can associate with their memories. These are happy thoughts, that can not die. Our loss may always render them pensive, but they will not always be painful. It is a part of the benignity of nature, that pain does not survive like pleasure, at any time, much less where the cause of it is an innocent one. The smile will remain reflected by memory, as the moon reflects the light upon us, when the sun has gone into heaven.

When writers like ourself quarrel with earthly pain (we mean writers of the same intentions, without implying, of course, anything about abilities or otherwise), they are misunderstood if they are supposed to quarrel with pains of every sort. This would be idle and effeminate. They do not pretend, indeed, that humanity might not wish, if it could, to be entirely free from pain; for it endeavors at all times to turn pain into pleasure, or at least to set off the one with the other; to make the former a zest, and the latter a refreshment. The most unaffected dignity of suffering does this; and, if wise, acknowledges it. The greatest benevolence toward others, the most unselfish relish of their pleasures, even at its own expense, does but look to increasing the general stock of happiness, though content, if it could, to have its identity swallowed up in that splendid contemplation. We are far from meaning that this is to be called selfishness. We are far indeed from thinking so, or of confounding words. But neither is it to be called pain, when most unselfish; if disinterestedness be truly understood. The pain that is in it softens into pleasure, as the darker hue of the rainbow melts into the brighter. Yet even if a harsher line is to be drawn between the pain and pleasure of the most unselfish mind (and ill health, for instance, may draw it), we should not quarrel with it, if it contributed to the general mass of comfort, and were of a nature which general kindness could not avoid. Made as we are, there are certain pains without which it would be difficult to conceive certain great and overbalancing pleasures.

We may conceive it possible for beings to be made entirely happy; but in our composition, something of pain seems to be a necessary ingredient, in order that the materials may turn to as fine account as possible; though our clay, in the course of ages and experience, may be refined more and more. We may get rid of the worst earth, though not of earth itself.

Now the liability to the loss of children—or rather what renders us sensible of it, the occasional loss itself—seems to be one of those necessary bitters thrown into the cup of humanity. We do not mean that every one must lose one of his children, in order to enjoy the rest; or that every individual loss afflicts us in the same proportion. We allude to the deaths of infants in general. These might be as few as we could render them. But if none at all ever took place, we should regard every little child as a man or woman secured; and it will easily be conceived what a world of endearing cares and hopes this security would endanger. The very idea of infancy would lose its continuity with us. Girls and boys would be future men and women, not present children. They would have attained their full growth in our imaginations, and might as well have been men and women at once. On the other hand, those who have lost an infant, are never, as it were, without an infant child. They are the only persons who, in one sense, retain it always; and they furnish their neighbors with the same idea. The other children grow up to manhood and womanhood, and suffer all the changes of mortality. This one alone is rendered an immortal child. Death has arrested it with his kindly harshness, and blessed it into an eternal image of youth and innocence.

Of such as these are the pleasantest shapes that visit our fancy and our hopes. They are the ever-smiling emblems of joy; the prettiest pages that wait upon imagination. Lastly, "of these are the kingdom of heaven." Wherever there is a province of that benevolent and all-accessible empire, whether on earth or elsewhere, such are the gentle spirits that must inhabit it. To such simplicity, or the resemblance of it, must they come. Such must be the ready confidence of

their hearts, and creativeness of their fancy. And so ignorant must they be of the "knowledge of good and evil;" losing their discernment of that self-created trouble, by enjoying the garden before them, and not being ashamed of what is kindly and innocent.

PETRIFIED CASCADE OF PAMBOUK KALESI.



THE petrified cascade of Pambouk Kalesi, as it is called by the Turks, is situated in Hierapolis, Asia Minor. The country around exhibits decided marks of violent volcanic action. Nearly the whole district of the Mæander is liable to earthquakes, and is burrowed under by channels full of fire and water as far as the interior of the country. The whole western part of Asia Minor is full of thermal springs; they are found also at Brusa, near the range of the Olympus. The rivers also are loaded with calcareous sediment, and, like the streams of other countries where limestone prevails, are found unfit for drinking. The singular effect of this cascade is produced by the rapid deposition of calcareous matter. Dr. Chandler has given the following description of it:—

"The view of the petrified cascade was so marvellous, that the description of it, to bear even a faint resemblance, ought to appear romantic. The vast slope, which at a distance we had taken for chalk, was now beheld with wonder, it seeming an immense frozen cascade, the surface wavy, as of water at once fixed, or in its headlong course suddenly petrified. Round about us were many high, bare, stony ridges; and close by our tent one with a wide basis, and a slender rill of water, clear, soft, and warm, running in a small channel on the top. A woman was washing linen in it, with a child at her back; and beyond were cabins of the Turcomans, standing distinct, much neater than

any we had seen; each with poultry feeding, and a fence of reeds in front.

"It is an old observation that the country about the Mæander, the soil being light and friable, and full of salts generating inflammable matter, was undermined by fire and water. Hence it abounded in hot springs, which, after passing under ground from the reservoirs, appeared on the mountains, or were found bubbling up in the plain, or in the mud of the river.

"The hot waters of Hierapolis have produced that most extraordinary phenomenon, the cliff, which is one entire incrustation. They were anciently renowned for this species of transformation. It is related they changed so easily, that being conducted about the vineyards and gardens the channels became long fences, each a single stone. They produced the ridges by our tent. The road up to the ruins, which appears as a wide and high causeway, is a petrification; and overlooks many green spots, once vineyards and gardens, separated by partitions of the same material. The surface of the flat above the cliff is rough with stone and with channels, branching out in various directions; a large pool overflowing and feeding the numerous rills, some of which spread over the slope, as they descend, and give to the white stony bed a humid look resembling salt or driven snow when melting. This crust, which has no taste or smell, being an alkaline, will ferment with acids; and Pichenini relates that trial of it had been made with spirit of vitriol. The waters, though hot, were used in agriculture."

That the inhabitants of Hierapolis were proud of their city is indicated by one of the inscriptions copied by Chandler from the walls of the ruined theatre, and which he thus translates: "Hail, Hierapolis, golden city, the spot to be preferred before any in wide Asia; revered for the rills of the nymphs; adorned with splendor."—"The nymphs," adds Dr. Chandler, "presided over springs and fountains." Hierapolis is described by Laborde as "situated on a plateau (platform, or tableland) detached from the chain of mountains which separates the valley of the Gallus from the chain of the Mæander, and which rises to a great height toward

The Petrified Cascade of Pambock Kalei, the ancient Hierapolis, in Asia Minor.



the centre of the country. A copious spring flows in the middle of the plateau, and, directed by little canals which still retain their ancient use, is lost in the plain, after having traversed the town, and formed the cascades upon the side of the rocks. The cascades are represented with their character of petrification or stalactite." The name of Pambouk Kalesi (the fortress or castle of cotton) has been given from the white aspect of the cascades.

STRAY THOUGHTS ON THE BEAUTIFUL.



It is a much more easily performed task to draw a correct picture, in all its details, of a landscape in nature or a scene in human life, embodying a beauty or a defect, than, separating them from the frame-

work in which they are set, to give an abstract and general definition of either. However cognizable at first sight a quality or a power may be, when displayed *in esse*, so inextricably blended is matter with all our habitudes of thought, that it seems as necessary to the formation of a mental conception as to the exercise of our corporeal functions. Mental and physical are coupled in our nature, strangely but strongly; and etherialists on the one hand, and materialists on the other, grumbling as they list, on they must jog together, mingling here, diverging there, till the final separation come. The most efficient handmaid of pure intellect is a frequent reference to things external; and puzzled though it may be in its unaided self, to form a conception of a something it knows to exist, but can not anatomize, a glance at the difficulty, as developed passively or actively, will afford all that is needed, better and in a more tangible form, than after the expenditure of the labors of a schoolman. Thus, in the endless attempts at a definition of the abstract beautiful, how various the theories propounded, how

absurd the ingenuities uttered! One philosopher seeks its mystical home in a certain definite combination of lines and curves, which he gravely lays down with mathematical precision; a second differs from the former in some of his conformation, and proceeds as gravely to defend his doctrine; while a third, disagreeing with both, is inclined to place it in an indefinable harmony or adaptation between the spectator and the spectacle—the objective and the subjective. Whether, according to the last theory, distortion is to be viewed as beauty in the abstract, because it appears perfection to the individual eye, or whether the opinion of the majority is to decide this point, we shall leave to others to determine, and proceed to make two or three rambling remarks on some of the objects in which, we opine, the mass of our unmystified readers will discover beauty, albeit they dissect not their lines and curves.

The first and most natural quarter in which we would seek for an illustration of the beautiful is in the inanimate world; and the search will not be in vain. All praise be to Him who created this glorious universe—the green earth, the blue heavens, and the silvery stars! On the mountain's summit, or in the still valley—on the ocean's shore, or on the richly cultivated plain—the manifestations of beauty are apparent, and confront the beholder at every turn. In casting the eye over a scene such as poets love—where "water-falls leap amid wild islands green," and sunshine mingles with leafy shade—where the air is ringing with a thousand songs, inarticulate but eloquent—where the emerald slope melts gradually into the dim blue of the distant hill—we become instantaneously impressed with a sensation of delight, and, heedless in which of the elements of the picture the charm lies, or whether, if one were removed, our admiration would be diminished, we acknowledge that herein is loveliness—herein we have a definition of beauty from nature's own vocabulary. Who can measure the humanizing influence of the contemplation of such scenes? Yet it is not in the aggregate alone that this quality is found; for the wing of the butterfly or the petal of the tiniest flower displays its existence

as truly; though with a less striking effect, as the wide-spread and complicated prospect. Storms have their beauty, their grandeur, their sublimity; and could that strong antagonistic feeling which we all possess, in the fear of personal danger, be subdued, doubtless their contemplation would be as grateful as that of milder scenes. Silence also has her charm as well as sound; and at times—when, in the sleep of nature, the world seems voiceless, and the eye, the only organ of sense which can convey impressions to the inner being—a calmly joyous thrill pervades the soul, such as the sweetest music never poured upon the Sybarite. That the quality of which we speak exists in all the works of God, can not for a moment be doubted; but it is to be found in varying degree in different objects; and thus, by contrast, the effect of its abundant presence is heightened—sunshine for cloud—the oasis for the desert—"beauty for ashes."

There is a beauty general and a beauty individual, or particular. Certain scenes are of such a description as at once to excite in the bosoms of spectators, constituted as ordinary mortals, emotions of delight—they overpower, they silence, they lead admiration captive. To the Englishman and to the native of some foreign clime, they, upon the universal principles of human nature, appear equally beautiful—the vale of Tempe would present the same attractions to the visiter of to-day as it did to him of generations ago. Another scene, again, has a local aptitude to the individual beholder; and though inferior to many in charms, or destitute of charms altogether, yet in his eye earth holds in her bosom no spot half so lovely. Some little incident in his isolated history, investing with a soul each feature of the landscape, changes his estimate, and endears it all. The favored inhabitant of the sunny south sees not more beauty in his blossomy land, than does the Norseman in his sterile shores and pine-clad mountains.

There is a beauty composite. It consists not in association alone—not in the aspect of the scene alone—not in the adventitious circumstances of the time alone. Take an illustration. Let us suppose that we are visiting some goodly gothic

cathedral, which has long since ceased to echo with chant or hallelujah. The floor is covered with epitaphs of warriors, and our feet are standing upon the tombs of the mighty. The architecture is magnificent, and in such a state of preservation as to have gained the hallowed charm of antiquity at the expense of none of its beauty; while the statues of armed knights stand here or there marking their last resting-places. The pale moon is throwing her silvery light through the massive and now unglazed window, softening the roughness of the angles, and imparting a witching effect to the scene. We are at once impressed with delightful awe, and pronounce it beautiful. In what does it consist? Not in association alone; for were the process of decay somewhat further advanced, the influence of association, though still as powerful, would not suffice to call up the same pleasurable feeling. Not in the naked aspect of the scene alone; for that, without something more, would give but a soulless delight, while, in adventitious circumstances, no innate charm can lie. Search, ye wise men, and tell wherein consists the elements of beauty! Thanks be to God, the peasant can feel its power, though unaided by philosophy.

There is a beauty in all the living works of the Creator—in bird, and beast, and creeping thing—but most is there in man. Ay, in him that powerful contrast to which we have alluded has full play: man's garb is motley. If the display of his light require the antagonism of shade, there is assuredly little lack! In his person, philosophers tell us that we have the perfection of physical beauty; in his intellectual powers we have the highest culmination of that something which is not matter; while, even in his moral constitution, are to be found gleams of sunshine—fitful, indeed, yet only on that account the more to be prized. There is a beauty in the march of the man who, returning amid the glad welcomings of thousands from effecting his country's deliverance, and crowned with the garlands of victory, is content with the tribute of a nation's gratitude. And there is a beauty, too, in the noiseless course of the humble child of poverty, as he wends his way onward through life, holding fast his integrity despite the

temptations of want, which beset him at every step. There is a beauty in the character of the moralist, who enunciates high problems pregnant with interest to society, and who casts generously upon the world the products of his great mind, replete with instruction and refinement to mankind—legacies inexhaustible, universal. And there is a beauty, too, in the walk of the simple peasant, who, with his Bible in his hand, strives in all things to conform in his conduct to the will of the Supreme, and, unlearned though he be, yet knows enough to make him love his neighbor as himself. There is a beauty in the merry laugh of light-hearted youth, as yet untainted by guile, and fresh as a May morning. There is a beauty also in the holy tear of the stricken penitent, which tells of the casting out of the evil spirit.

There is a beauty in woman. Smile not, most gallant reader, at this sapient truism. The rank heresy of even for a moment imagining that a fact, indubitable as the personal charm of woman is, can require affirmation, we mean not to be guilty of—it is of her moral attractions we now speak. The power of the female character for good who can estimate! the number of woman's melting charities, in the palace and in the cottage, who can count! Truly was she formed an help meet unto Adam—smoothing asperity, lightening sorrow, gladdening joy—a personification of the beautiful, the contemplation of which corrects, elevates, refines. Whether it be the ivory brow circled with sparkling diadem, or the sunburnt forehead wreathed with rushes from the brook, the impress of beauty is there, reflecting the moral loveliness that dwells within.

Gaze we upon the works of man! Even there is to be found ample food for admiration. Not alone in the stupendous pyramids, seemingly the memorials of conjoint power and folly—not alone in the most finished edifices of stateliest architecture—nor in the classic productions of master pencils—nor in the bright compositions of inspired minds, is beauty to be discovered; but in every mossgrown ruin and tenantless hall are gems to be met with—flowers with fruits, the admira-

ble with the admonitive. We might proceed to enumerate beauty in a thousand shapes in nature, in art, in man's moral being, but we refrain. All the glory of this earth, and of what it contains, is but a mirrored reflection, not an innate quality. In the sunshine of its Creator's smile, it wears a pleasing aspect, and, in the words of old Spenser, let it be:—

"That, with the glory of so goodly sight,
The hearts of men, that fondly here admire
Fair-seeming shows, and feed on vain delight,
Transported with celestial desire
Of these fair forms, may lift themselves up higher,
And learn to love, with patient, humble duty,
The Eternal Fountain of that heavenly beauty."

THOUGHTS ON WINTER.



TOETS have numbered among the felicities of the golden age an exemption from the change of seasons, and a perpetuity of spring; but we think that they have not made sufficient provision for that insatiable demand for new gratifications which seems particularly to characterize the nature of man. Our sense of delight is in a great measure comparative, and arises at once from the sensations which we feel, and those which we remember. Thus ease after torment is pleasure for a time, and we are very agreeably recreated when the body, chilled with the weather, is gradually recovering its natural tepidity, but the joy ceases when we have forgotten the cold; we must fall below ease again, if we desire to rise above it, and purchase new felicity by voluntary pain. It is therefore not unlikely, that however the fancy may be amused with the description of regions in which no wind is heard but the gentle zephyr, and no scenes are displayed but valleys enamelled with unfading flowers, and woods waving their perennial verdure, we should soon grow weary of uniformity, find our thoughts languish for want of other subjects, call on heaven for our wonted round of seasons, and think ourselves liberally recompensed for the inconveniencies of summer and

winter, by new perceptions of the calmness and mildness of the intermediate variations.

Every season has its particular power of striking the mind. The nakedness and asperity of the wintry world fill the beholder with pensive and profound astonishment; as the variety of the scene is lessened, its grandeur is increased; and the mind is swelled at once by the mingled ideas of the present and the past—of the beauties which have vanished from the eyes, and the waste and desolation that are now before them.

Yet let us reflect on the blessings Heaven grants us at this season, which appears to us so severe. The frost and cold prevent many hurtful vapors in the higher regions of the atmosphere from falling upon us, and even purify the air. Far from being always bad for our health, it often strengthens it, and preserves the humors from putrefaction, which a constant heat would certainly occasion. If the vapors which collect in the atmosphere were always to fall in rain, the earth would be too soft and wet, our bodies would be too full of humors and too much relaxed; whereas the cold braces and promotes the circulation of the blood. In very hot countries, and where the winters are rainy and wet, serious and mortal diseases are much more frequent than elsewhere. We are told by travellers, that in Greenland, where the ground is covered with mountains of ice, and where, in winter, the days are only four or five hours long, the air is very wholesome, clear, and light; and except a few complaints in the chest and eyes (occasioned partly by the quality of the food), they have seldom there the disorders so common in Europe. It is also certain that the constitution of the human body varies according to the different climates; consequently the inhabitants of the northern countries have constitutions adapted to extreme cold, and are generally strong and robust. As man, though active by choice, and though labor is necessary to him, is still glad to interrupt his employments to taste the sweets of sleep; so also nature yields to the change of seasons, and takes a pleasure in it, because, in reality, it contributes toward our welfare and happiness. Al-

though our fields and gardens be buried in snow, this is necessary, in order to preserve them from the cold, as well as to prevent the grain from corrupting. The ground requires rest after having yielded in the summer all that we want for the winter. If our present wants had not been provided for; if in this severe season we were obliged to cultivate the earth, there might be some foundation for our complaints. But provision is made for these; they are all supplied, and we enjoy a repose suitable to the season.

To these advantages let us add what has frequently been remarked, and is always very pleasantly felt, that winter has been celebrated as the proper season for merriment and gayety. We are seldom invited by the votaries of pleasure to look abroad for any other purpose than that we may shrink back with more satisfaction to our coverts, and, when we have heard the howl of the tempest and felt the gripe of the frost, congratulate each other with more gladness upon a close room, an easy chair, a large fire, and a smoking dinner. Winter brings natural inducements to jollity and conversation. Differences, we know, are never so effectually laid asleep, as by some common calamity. An enemy unites all to whom he threatens danger. The rigor of winter brings generally to the same fireside those who, by the opposition of inclinations, or difference of employment, moved in various directions during the other parts of the year; and when they have met, and find it their mutual interest to remain together, they become endeared to each other by mutual compliances, and often wish for the continuance of the social season, with all its bleakness and all its severities.

Dr. Johnson has remarked an advantage of winter, which men of his stamp will feel with peculiar energy, and it is certainly founded on truth. "To men of study and imagination," says he, "the winter is generally the chief time of labor. Gloom and silence produce composure of mind and concentration of ideas; and the privation of external pleasure naturally causes an effort to find entertainment within. This is the season in which those whom literature enables to find amusements for themselves have more than com-

mon convictions of their own happiness. When they are condemned by the elements to retirement, and debarred from most of the diversions which are called in to assist the flight of time, they can find new subjects of inquiry, and preserve themselves from that weariness which hangs always flagging upon the vacant mind."

The winter, however, differs very essentially in some countries. If we feel ourselves disposed to complain, let us consider the following facts, which relate to a great part of those nations, which have neither spring nor autumn. The heat is as intolerable in summer as the cold is in winter. The severity of the latter is such that the spirits of wine in the thermometer freeze. When the door of a warm room is opened, the outward air which comes in turns all the vapors into snow, and they appear like thick white clouds. If any one goes out of the house, he is almost suffocated, and the air seems to pierce through him. Everything appears dead, as nobody dares to venture abroad. Sometimes the cold becomes so intense all of a sudden that, if they are not saved in time, people are in danger of losing an arm, a leg, or even their life. The fall of snow is still more dangerous; the wind drives it with such violence that nobody can find their way; the trees and bushes are covered with it, the sight is blinded by it, and people sink into precipices at every step. In summer it is constantly light for three months, and in winter it is perpetual night during the same space of time. Those who complain of the cold in our countries, seem not to know our advantages.

Yet we are mistaken if we suppose that the inhabitants of the pole are unhappy from the severity and length of their winter. Poor, yet exempt, through simplicity, from all desires difficult to gratify, those people live content in the midst of the rocks of ice which surround them, without knowing the blessings which the southern nations consider as an essential part of their happiness. If the barrenness of their soil prevents them from having such variety of productions of the earth as we have, the sea is so much the more bountiful in her gifts to them. Their way of

living inures them to cold, and enables them to defy storms. As to particular resources, without which they could not bear the rigor of the climate, nature provides them with abundance. Their deserts are full of wild beasts, whose fur protects them from cold. The reindeer furnishes them with food, drink, beds, clothes, and tents. These are most of their wants, and it costs little trouble to get them supplied. When the sun does not rise with them, they are surrounded with darkness, but nature itself lights a torch for them—the aurora borealis brightens their night. Perhaps these people consider their country as the greatest and happiest upon earth, and may pity us as much as we pity them.

Winter, too, has its moral and religious uses and lessons. There are the winter of adversity, the winter of age, and the winter of the tomb, of all which it speaks and is the emblem. And there is no season in which there are more pressing calls for charity, and none in which the rich ought to feel their own comforts with a gratitude more lively, and be consequently more disposed to exertions in favor of the poor:—

"Sore pierced by wintry winds,
How many shrink into the sordid hut
Of cheerless poverty! . . .
Thought fond man
Of these
The conscious heart of charity would warm
And her wide wish benevolence dilate."

THE COMMONPLACE.



NY person who looks around the circle of his acquaintance, will find at least one individual who passed through the world almost unheeded; for it is most likely his misfortune not to possess any characteristic prominent enough to distinguish him from the rest of mankind. His countenance is so commonplace, that a short walk in any much frequented street will show us at least a half-dozen sets of

features of a similar cast. His height is so very ordinary, that at least thirty per cent. of his fellow-men measure the same number of feet and inches. His shape is neither handsome nor disproportioned. Had, indeed, he been blessed with a deformity, it would have set a mark upon him by which he might have been known from other persons of his own age and status.

Nor is it his outward aspect only which herds an individual of this class with the multitude. There is as little to distinguish him from the mass in his mind as in his person. He has neither ambition nor energy to dart ahead of the crowd. He does exactly as other people do, and would not do anything which other people do *not* do for the world. He is timid, reserved, and apparently grave. Of conversation he has little, and it requires a strong stimulant to set his tongue in motion: argument is of course quite out of the question with a man who seldom has courage to differ aloud with the most extravagant opinions. Though he never asks questions, he will answer them; but when he does, he is sure to tell you something you know already. As the snail comes out when it is touched, and again retires into its shell, so do the commonplace require to be stimulated by a question ere *they* will "come out." Having spoken, they shrink back under the crust of conscious insignificance.

Despite all these defects, however, the commonplace are among the most useful members of society, only their usefulness begins where that of more brilliant spirits ends. Feeling their general deficiencies, they court favor by doing what a great many other people decline. In fact it is only their readiness to oblige—their unfailing good-nature, which prevents them from being utterly overlooked and neglected. When, for instance, a party is being made up, Mr. Nobody is added to the list of guests because there is some old lady to see home. He is always ready to carve, so is asked out to dinner now and then. When three persons are inclined to have a game at whist, he is preferred to "dummy;" or when seven want to dance a quadrille, he is asked to join merely because he makes the eighth. He is invited to pic-nics for the sole reason

that his contributions will increase the stock of champagne, and reduce to each paying member of the party a proportion of the general expenses. Besides his uses in these respects, the commonplace man is of signal service at the social board and in the midst of conversation, for this seemingly paradoxical reason; he seldom talks himself. If every convive were a wit, a genius, or a philosopher, there would be no contrast, no relief; like a play, all of whose characters are kings, or a picture, with all lights and no shadows. Hence the commonplace perform an important part in a social tableau; they harmonize contrasts; they are the neutral tints which blend the high lights of intellect with the deep shadows of stupidity. Where there are voluble talkers, they are invaluable; they listen well, and relieve the monotony of a long story by exclamations which encourage the narrator, and which no one else will condescend to make; such as "indeed!"—"really!"—"how strange!"—"remarkable!" with a carefully nursed and very impressive "extraordinary!" for the catastrophe. Again, the commonplace man never winces at a sly jest which may be aimed at him. Indeed he rather likes it—he is delighted to be taken notice of on any terms.

To all rules there are exceptions; and a few of the commonplace make desperate struggles to be known and distinguished from the general herd. Some adopt a conspicuous style of dress; others eccentricity of manners. They often try to disguise the hopeless commonness of their figures by means of odd-shaped hats, many hued waistcoats, and curiously-colored gloves. It has often been a matter of surprise what becomes of certain extraordinary cravats and stocks one sees displayed in hosiers' shops: some of an ultracerulean blue, spangled all over with gilt stars. Observation, however, will show that they are manufactured for the commonplace, who alone are seen to wear them. Even these expedients are often found to fail, and the victims of Nature's impartiality occasionally call in her aid to help them out of the crowd into which they feel themselves to be so firmly wedged. They let their hair grow to inordinate lengths, coax their whiskers into

strange shapes, while those who are very bold indeed mount mustaches. In nine cases out of ten, however, not one of these expedients succeed, and even in the tithe of instances in which the object is gained, the notice attracted is seldom of a flattering kind.

Another extrinsic expedient resorted to by the commonplace is that of taking unto themselves high-sounding Christian names. Whether the extreme prevalence of the name of "Smith" gives rise to the notion, or whether it be a fact, can not be decided; but certain it is, that this popular cognomen and commonplace people are very generally associated. At a random, but moderate computation, at least a moiety of the commonplace are called "Smith." Out of this legion a few of the bolder spirits, scorning the shackles of non-individuality which this name fastens to them, put a preface of prenomes to that which they inherit from their ancestors. This, then, accounts for the frequent occurrence of "Constantine Agrippa," "Mackenzie Mackintosh," "Pelham de Crespigny," and a hundred equally euphonious prefixes, which end like the bathos of an extravagant poem, in the surname "Smith." Upon paper, this expedient answers. So long as the writer of the classical or aristocratic signature keeps out of sight, your imagination is very likely to picture him as something more than common. His high-sounding names make a great effect in advertisements, play-bills, and the prospectuses of joint-stock companies: but once get introduced to him—once stand face to face with him, and the grand associations called up by his Christian names when in print, vanish like the "baseless fabric of a vision." His appearance, manners, and conversation, are perhaps so intensely commonplace, that the only name which it is possible to be suggested to your mind, is that which he in reality bears—Smith.

In truth, all such struggles as those we have described are useless. The really commonplace will be commonplace in spite of the most persevering struggles, so long as these efforts are directed to mere externals. It is only by mental exertion, and the cultivation of intellect, that their emancipation is to be worked out.

LIFE WITHOUT AN AIM.

THOSE of us who are familiar with the shore, may have seen, attached to the inundated reef, a creature, whether a plant or animal you could scarcely tell, rooted to the rock as a plant might be, and twirling its long tentacula as an animal would do. This plant-animal's life is somewhat monotonous, for it has nothing to do but grow and twirl its feelers, float in the tide, or fold itself up on its foot-stalk when that tide has receded, for months and years together. Now, would it not be very dismal to be transformed into a zoophyte? Would it not be an awful punishment, with the human soul still in us, to be anchored to a rock, able to do nothing but spin about our arms or fold them up again, and knowing no variety, except when the receding ocean left us in the daylight, or the returning waters plunged us into the green depths again, or the sweeping tide brought us the prize of a young periwinkle or an invisible star-fish? But what better is the life we are spontaneously leading? What greater variety marks our existence, than chequers the life of the sea-anemone? Does not one day float over us after another, just as the tide floats over it, and find us much the same, and leave us vegetating still? Are we more useful? What real service to others did we render yesterday? What tangible amount of occupation did we overtake in the one hundred and sixty-eight hours of which last week consisted? And what higher end in living have we than that polypus? We go through certain mechanical routines of rising, and dressing, and visiting, and dining, and going to sleep again; and are a little roused from our usual lethargy by the arrival of a friend, or the effort needed to write some note of ceremony. But as it courtesies in the waves, and vibrates its exploring arms, and gorges some dainty medusa, the sea-anemone goes through nearly the same round of pursuits and enjoyments with our intelligent and immortal self. Is this a life for a rational and responsible creature to lead?

If we had no faults ourselves we should not take pleasure in observing those of others.

DECEMBER.



HIS month still retains its original name, derived from the Latin words *decem* and *imber*, although its place in the calendar is different from that originally assigned to it.

By our Saxon ancestors it was styled *Winter-monat*, i. e. winter-month: upon their conversion to Christianity, they named it *Heligh-monat*, or holy-month.

The changes which take place in the face of nature during this month, are little more than so many advances in the progress toward universal gloom and desolation:—

"No mark of vegetable life is seen,
No bird to bird repeats his tuneful call,
Save the dark leaves of some rude evergreen,
Save the lone red-breast on the moss-grown wall."
SCOTT.

The day now rapidly decreases; the weather becomes foul and cold; and, as SHAKESPEARE expresses it—

"The rain and wind beat dark December."

Several of the wild quadrupeds now take to their winter concealments, which they seldom or never quit during the winter. Of these, some are in an absolutely torpid or sleeping state, taking no food for a considerable time; others are only drowsy and inactive, and continue to feed on provisions which they have hoarded up. In our climate few become entirely torpid. Bats do so, and retire early to caves and holes, where they remain the whole winter, suspended by the hind feet, and closely wrapped up in the membranes of the fore feet. As their food is chiefly insects, they can lay up no store for the winter, and therefore must be starved, did not nature thus render food unnecessary for them. Dormice also lie torpid the greater part of the winter, though they lay up stores of provision. A warm day sometimes revives them, when they eat a little, but soon relapse into their former condition.

Squirrels, and various kinds of field-mice, provide magazines of food against winter, but are not known to become torpid. The badger, the hedgehog, and

the mole, keep close in their winter-quarters in the northern regions, and sleep away great part of the season.

"Hedgehogs," says Mr. Knapp, "were formerly an article of food; but this diet was pronounced to be dry, and not nutritive, 'because he putteth forth so many prickles.' This little quadruped, upon suspicion of harm, rolls itself up in a ball, hiding his nose and eyes in the hollow of his stomach, and thus the common organs of perception—hearing, seeing, and smelling—are precluded from action; but by the sensibility of the spines, he seems fully acquainted with every danger that may threaten him, and upon any attempt to uncoil himself, if these spines be touched, he immediately retracts, assuming his globular form again, awaiting a more secure period for retreat."

Little was known of the habits of the mole, until M. St. Hilaire, the eminent French naturalist, brought to light some interesting particulars concerning this little animal: the manner in which she forms a receptacle for her young is very curious: in order to render the receptacle which she and her young occupy, not liable to be injured by the rain, she makes it almost even with the ground, and higher up than the runs, which serve as channels to carry off the water.

The place of her abode is chosen with the greatest care, generally constructed at the foot of a wall, or near a hedge or tree, where it has no chance of being broken in. The nest for the young is composed of blades of wheat, with which the mole forms a sort of mattress. The power of smelling in the mole is very acute, and this sense in all probability directs her in the search of food. Her search for prey generally takes place in the morning and evening, when the feathered creation are usually feeding, and whose means of subsistence must be greatly increased by this little animal driving worms to the surface of the earth.

The early vegetables which now flourish are the numerous tribes of mosses, and the lichens or liverworts. The mosses put forth their singular and minute part of frustification during the winter months, and offer a most curious spectacle to the botanist, at a time when all the rest of

nature is dead to him. Lichens cover the ditch banks, and other neglected spots, with a leather-like substance, which in some countries serve as food both to men and cattle. The rein-deer lichen is the greatest treasure of the poor Laplanders, who depend upon it for the support of their only species of domestic cattle, during their tedious winters.

On the twenty-second of December happens the winter solstice, or shortest day; when the sun is hardly ten hours above the horizon.

The farmer has little to do out of doors in the course of this month. His chief attention is bestowed upon the feeding and management of his cattle, and various matters of household economy.

The festival of Christmas occurs very seasonably, to cheer this comfortless period of the year. Great preparations are made for it in the country, and plenty of rustic dainties are provided for its celebration according to the rights of ancient hospitality. Thus the old year steals away scarcely marked and unlamented; and a new one begins, with lengthening days and brighter skies, inspiring fresh hopes and pleasing expectations:—

"Mysterious round! what skill, what force divine,
Deep-felt, in these appear; a simple train;
Yet so delightful, mixed with such kind art,
Such beauty and beneficence combined!
Shade, unperceived, so softening into shade;
And all so seeming an harmonious whole,
That, as they still succeed, they ravish still!"

THOMSON.

THE CHETAH, OR HUNTING LEOPARD.



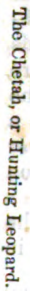
THE chetah is a native of India, where it is trained for the chase; and also of Africa. It is as large, or nearly so, as the leopard, but is superior in height, owing to the length of its limbs, which are slender and tapering; its body also is less robust. The fur is more than moderately full, and of a yellowish fawn-color, beautifully covered with round black spots; and

a distinct stripe of this color passes from the inner angle of the eye to the mouth. A thin hog-like mane runs down the back of the neck. The forehead and outline of the profile are convex; the eye is very fine, large, and expressive.

The mode of coursing with the chetah is thus described: they are led out in chains with blinds over their eyes, and sometimes carried out in carts; and when antelopes or other deer are seen on a plain, should any of them be separated from the rest, the chetah's head is brought to face it, the blinds are removed, and the chain taken off. He immediately crouches and creeps along with his belly almost touching the ground, until he gets within a short distance of the deer, who, although seeing him approach, appears so fascinated, that he seldom attempts to run away. The chetah then makes a few surprising springs, and seizes him by the neck. If many deer are near each other, they often escape by flight; their number giving them confidence, and preventing their feeling the full force of that fascination which to a single deer produces a sort of panic, and appears to divest him of the power, or even inclination, to run away or make resistance. It is clear that they must always catch them by stealth, or in the manner we have described, for they are not so swift even as common deer.

To this account we may add that, should the chetah miss his aim, he desists from further pursuit, and slinks back to his master, who replaces the hood, and reserves him for another chance. When he is successful, the ferocity of his nature at once displays itself, so that, to recover the prey, the keeper is obliged to be extremely cautious, enticing him with meat carried for that purpose.

The chetah (*Felis jubata*) belongs to the typical genus (*Felis*) of the "carhassiers" of Cuvier, though in one point it offers a slight departure of form from the group with which it is associated; we allude to the semi-retractile condition of the talons. If we examine the talons of the lion or tiger, we find them capable of being withdrawn into a sheath, so that unless when brought into action they are completely hidden. This retractability results from the mechanism of the joint uniting the



last phalangeal bone to the one which precedes it, so that the former bone, which is partially encased in the talon or hooked nail, is allowed to pass by the inner side of its predecessor. The retraction is involuntarily effected by a lateral ligament, which acts as a sort of spring, and by the natural action of the extensor muscles of the fore-arm operating by means of tendons on the bones to which these formidable engines are attached. Now, in the chetah, the talons are at best but partially retractile from the laxity of the ligaments, and, consequently, are more worn and blunted at the points than is the case in the lion, tiger, or panther; besides this, the paw is less rounded and cat-like, and, in fact, more approaching that of the dog in its general form than is to be found in any other of the genus. In anatomical conformation, however, as well as in disposition, the chetah is strictly feline.

THE SCIENCE OF THE SCRIPTURES.



WHEN we consider that the sacred writings are specially devoted to the moral and spiritual concerns of mankind, we are not to look into them for scientific disquisitions, much less for the explanation of many of those deep mysteries—those ultimate causes, which seem beyond the grasp of the human intellect, and were evidently intended to be for ever hid from man in his sublunary condition. At the same time, considering the high authority of the scriptures, when they do casually allude to physical phenomena, we naturally expect that no statements at variance with physical science shall be given. Accordingly, we find that the language of scripture is extremely guarded—we might almost say most wonderfully precise in this particular; and moreover, where there may appear a discrepancy between its statements and the phenomena of nature, that discrepancy will be found to arise from the limited

observation or erroneous views of man, not from any misstatement or inaccuracy in the sacred record.

It has been said that the scriptures contain the germ of all true philosophy. Most certain it is that science has grown up and flourished almost exclusively among that favored portion of mankind to whom the sacred writings have been made known. These ennobling truths have expanded the mind, subdued the crude and roaming intellect, and directed the judgment to views both of physical and moral nature, which have been conducive in the highest degree to the progress of civilization.

Though the sacred writers on no occasion professedly treat of natural science, yet we find many allusions to the operations of nature scattered through their pages. Much of the beautiful imagery of scripture, too, is drawn from natural objects—the flowers of the field, the birds of the air, and the beasts of the forest, are all employed to illustrate and exalt the ways of Providence with man. What a treasure would be found could we recover at this day the lost treatises of Solomon on all these subjects!

Many illustrations might be given of the accuracy of scientific allusions found in scripture; we shall select a few.

Solomon says (*Ecclesiastes*, i. 7), "All the rivers run into the sea; yet the sea is not full: into the place from whence the rivers come, thither they return again." This is just the modern explanation of atmospheric evaporation. Clouds of moisture rise from the ocean, float about in the atmosphere, descend in rain, and, collecting into rivers, this moisture, after ministering to plants and animals, flows again into the sea. From the expression, "there ariseth a little cloud out of the sea" (*1 Kings*, xviii. 43), and various other similar allusions, it is perfectly evident that the sacred writers were familiar with atmospheric evaporation. Yet, at a comparatively modern period, it was a favorite theory of meteorologists, that the waters of the ocean made their way up from the sea through the porous sand and rocks; and thus filtered, lost their saline particles, and then issued as springs of fresh water from the mountain tops and sides. And this ex-

planation was made to harmonize with the words of Solomon just quoted. Nothing could be more incorrect than this explanation, both in a chymical and mechanical acceptance. Unchymical, because no filtration will deprive water of salts dissolved in it by a chymical solution—unmechanical, because no fluids, even supposing a capillary attraction, will rise in such quantities, or to such heights, contrary to the known laws of hydrostatics. When clearer views of the laws of evaporation revealed the falsity of this theory, the error was extended to Solomon also, although it is evident that his statement agrees both with the actual process of nature, as well as with the latest and more correct exposition of this process.

It is not a little remarkable to observe, that Moses, in his detail of the animal creation, follows exactly the modern zoological arrangement—that is, he begins with the formation of the simplest animals, and ascends in the scale according to the complexity of the higher structures. Now, it is evident that Moses did not in this instance adopt any cotemporary system of zoology, because the system of the Egyptian priests, as far as we learn from Pythagoras and Aristotle, who gleaned part of their information from them, was by no means so scientific. From Aristotle downward, a very incomplete arrangement of the animal kingdom prevailed; and, in fact, it was not till the time of Cuvier, in the beginning of the present century, that anything like a correct arrangement of animal beings was accomplished. After long and laborious researches made by this great naturalist and his coadjutors into the minute structure and comparative anatomy of animals, a system was framed, beginning with the simplest and lowest forms of creeping things, and ascending by a progressive scale to the most perfect animals.

Now, supposing an uninspired and unscientific person in the time of Moses to have set about constructing an account of the creation, it is most likely that he would have commenced with man and the higher animals, and gone on in the descending scale—a system which was, indeed, followed by all the writers on animals previous to the discoveries of Cuvier.

The spontaneous production of animals from the earth or soil without a parent, and the equivocal production of new species from the bodies of other larger animals, were also dreams of the philosophers of former days, and are indeed to some extent prevalent in the present time. Yet the distinct succession of species from parent species, is an express statement of the scriptural narrative—"Let every plant and every animal bring forth seed after its kind." The minute observations of the microscope have, by prodigiously enlarging the field of vision, shown that the habits of even the smallest animal are perfectly in accordance with this scriptural statement.

The distinction between matter and spirit is repeatedly alluded to in the sacred writings. The organization of the human body and its subsequent endowment with life is also unequivocally stated. "The Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life, and man became a living soul." Theories of materialism have in all ages been prevalent in opposition to this view; yet the phenomena of life can never be satisfactorily explained on the supposition that it is the result of matter alone. The physiologist must assume a vital force, or power, or principle; the moralist a thinking principle or mind.

We can not look at the intelligent eye—we can not contemplate the motions and actions of even the simplest animal—without being conscious that there is something here more than in the rocks and stones, and the inert and lifeless matter around us. "Who knoweth the spirit of man that goeth upward, and the spirit of the beast that goeth downward to the earth?" (Ecclesiastes iii. 21.) "Or ever the silver cord be loosed, or the golden bowl be broken, or the pitcher be broken at the fountain, or the wheel broken at the cistern: then shall the dust return to the earth as it was; and the spirit shall return unto God who gave it." (Ecclesiastes xii. 6, 7.)

When a seed of any plant, as wheat or barley, is put into the ground and subjected to the action of heat, moisture, and air, the seed lobe or cotyledon immediately begins to assume a new action. The

starchy matter of which the great bulk of it is composed undergoes a chymical change, and is speedily converted into a half-liquid sugar; in this state it affords nourishment to the young and minute germ in the centre, until this germ pushes out roots into the surrounding soil. In this respect the seed may be said to die, as its greater part passes from the organized state under which it had hitherto resisted decay, to the condition of inorganic or dead matter. Any one may satisfy himself of this by pulling up a plant of wheat or barley when it is about an inch above ground; the slough of the seed will then be found attached with its centre collapsed, and in a state of rottenness. Hence St. Paul's comparison of the resurrection of the body to the germination of a seed is, in all that is necessary for such analogies, scientifically correct: "That which thou sowest is not quickened except it die." (1 Corinthians xv. 36.) We have the same comparison made by Christ himself: "Verily, I say unto you, except a corn of wheat fall into the ground and die, it abideth alone; but if it die, it bringeth forth much fruit." (John xii. 24.)

By some flimsy and superficial cavillers, these have been instanced as cases of the little dependence to be placed in the scientific accuracy of the Scriptures. Yet the speakers on these occasions were alluding to a fact which was within the sphere of the least observant of their hearers; for if they examined a young plant, "it may chance of wheat or of some other grain," they could not fail to see attached to the green budding germ the remnants of the seed in a state of rottenness and decay.

The sacred writers frequently illustrate their precepts by allusions to the scenery and operations of nature. None are more frequent than references to the revolving seasons. "Spring time and harvest," breathe of cheering hope and of promises fulfilled. In Palestine, and indeed in all the warmer regions of the globe, the seasons differ somewhat in their sequences from what takes place in this country. Along the whole southern shores of the Mediterranean, and in the most fertile parts of Asia, including Palestine, in consequence of the early spring, the grain

crops, as well as other fruits of the earth, come early to maturity, so that harvest comes on and is finished before midsummer. Hence that scriptural simile, "the harvest is past, the summer is ended, and we are not saved," is strictly correct as to the sequence of the respective seasons, although it would appear an inaccurate allocation of terms as applied to our northern climates.

The scripture language is very guarded with respect to all physical allusions beyond the sphere of our earth. The heavenly bodies—the sun, moon, and stars—are casually alluded to as objects displaying the majesty of the Creator; but astronomy was a field too wide and too remote from the moral wants of man to be entered into. Any actual information regarding these bodies, would perhaps have proved of too distracting a nature for his present limited sphere to be of any use. We accordingly find, that when any allusion is made to them, it is simply as they are seen by us. Hence the sun is said to rise and set, just in such language as is used at the present day by the vulgar, as well as by the best informed astronomers. And hence the famed persecution of Galileo arose from the bigotry of the age, and the supremacy of the religion to which he belonged; not to anything in Scripture in the slightest degree opposed to astronomical science.

This very reserve of the Scriptures on all delicate points is an internal evidence, among many others, of their authenticity and high authority. They are as remarkable for what they withhold as for what they impart. What mere mortal, in writing even on the most sacred subjects, is not fond of a somewhat over display of knowledge? Perhaps this accurate and guarded language of scripture in all that respects secular science, can not be more forcibly brought out than by contrasting it with the writings of uninspired theologians. We need only allude here to the books called Apocryphal for examples of what we mean; and if we turn to the pages of the early fathers who wrote after the introduction of Christianity, we shall find that whenever these uninspired men touch upon science, it is but the science of their own day, and consequently full of all sorts of errors and crudities.

After these examples of scriptural accuracy, we ought surely to hesitate ere we give way to skeptical doubts on any adverse propositions. Such is the imperfection of human science, that every new step we make in it is but the correction of an old error. We build up fabrics of speculation to-day, which the facts of to-morrow level with the dust; whereas, the dicta of scripture are the results of infinite wisdom, and are founded on the adamant rock of ages.

Far be it from us, however, to seem to damp the energies of scientific pursuit, or to cast the slightest shade on the beauty and utility of true science. The more perfect that it becomes, the nearer will it resemble that Divine Wisdom which at first framed and continually upholds the material universe.

FREEDOM OF THE MIND.

WHEN the mind once tries its strength, it can no longer be restrained. The attempts to keep it down have served only to render it, in most cases, from its native elasticity, the more impatient of these restrictions. The civil arm has often been exerted to establish the supremacy of some one sect, which, in the struggles and revolutions of society, has happened to be uppermost. It has put forth the power of the laws. It has tested the efficacy of pecuniary penalties. It has seen what imprisonment and torture would do. It has kindled the flames of persecution; and has tried the effect of fire upon the flesh, by way of correcting the irregularities of the mind. Every method which human ingenuity or refined cruelty could devise, has been attempted to restrain the inquiry of men; or rather to bring them to a conformity to the predominant standard of religious doctrine.

But it has all been in vain. With the attempt to produce uniformity or conformity of faith or worship, dissent and diversity of opinion have increased. Sometimes such attempts have partially succeeded for a time, but the reaction in the end has always been proportioned to such

success. The human mind naturally resists compulsion.

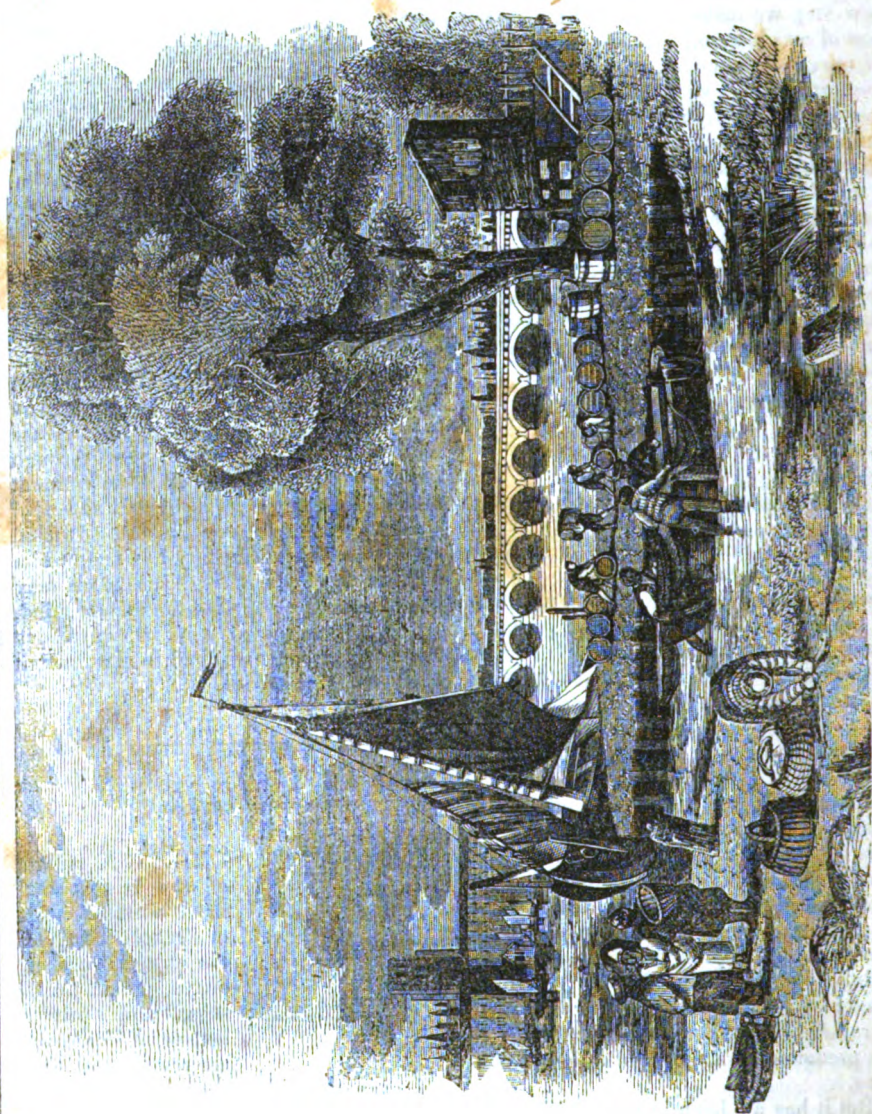
Men in general prefer to go wrong of their own accord, rather than be compelled to go any way at the will of another, who they know has no rightful authority over them. When you attempt to force men to believe a doctrine or rite, which does not approve itself to their own judgment or knowledge, you immediately invite them to inquire into the authority of the one, or the reasonableness of the other; and inquiry under such circumstances commonly leads to doubt, and doubt often leads to dissent. If encroachment and intolerance have led to dissent, these in their turn have often prompted to further encroachments and multiplied restraints on the freedom of inquiry.

But all would not do. The thoughts of men will be free. You can place no restrictions on their inquiries, which the mind will not sooner or later break through or transcend. As it is said of an eminent artisan, that as yet he has found no vessel strong enough to contain the powerful steam which his ingenuity has taught him the means of generating, still more may it be said of the action of the human mind, that it possesses in itself an expansive force, which, when excited, will surmount every artificial barrier.

BORDEAUX.



BORDEAUX is one of the largest and most beautiful cities of France. Many of the streets, squares, quays, public buildings, and private houses, of Bordeaux, are remarkably fine, and even magnificent, while they derive additional splendor from the striking view which they present from the river. The stone bridge over the Garonne is one of the finest works of the kind on the continent, and is 531 yards in length, or one third longer than London bridge. It has seventeen arches, the seven central arches



Bordeaux, and Bridge over the Garonne.

having each a span of eighty-seven feet ; the breadth between the parapets is fifty feet, and the roadway is nearly level. The difficulties attending the creation of this bridge was very great, owing to the depth of the river, which in one part is twenty-six feet at low-water, with a rising tide of from twelve to eighteen feet, and a current which often flows with the velocity of seven miles an hour ; and, to add to these obstacles, there is a shifting and sandy bottom. The bridge was begun in 1811, and finished in 1824.

Several of the finest streets are lined with trees, and form a fine promenade. Thus the Cours d'Albret is nearly half a mile long, and the Cours du Tourny and du Jardin Public form together a line three quarters of a mile in length. The principal square is the Place Louis Philippe Premier, formerly Place Louis Seize, each side of which is a quarter of a mile long. At one end it is open to the river ; on the other it is crossed by the Cours Douze Mars, beyond which the place is enclosed by a range of houses in the form of a crescent. On the sides plots of considerable size are planted with trees, forming the Allées Angoulême and de Berri. There are several other fine squares or "places," and a public garden. The exchange and the customhouse, both fine edifices, form two sides of the Place Royale. The quays stretch to a great length along the river, and have an appearance at once interesting and imposing. The public bonding-warehouses for colonial and other merchandise and produce are remarkable for their extent and beauty. The principal theatre for size and magnificence is scarcely exceeded by any in Europe. Neither the cathedral nor the Hôtel de Ville are marked by any very striking features. Bordeaux possesses all the public establishments of a city of the first class.

There are a mint, an observatory, an académie universitaire, a collège royal, schools of architecture, hydrography and navigation, botany and natural history, drawing and painting, medicine and surgery ; several learned societies, a public library, museum of antiquities, and a gallery of paintings.

Bordeaux is the chief outlet of the south-

western and even of the southern and mid-land parts of France. Its situation on the Garonne, not far from the estuary of the Gironde, which receives the waters both of the Garonne and the Dordogne, gives to Bordeaux the advantage of nearly one thousand miles of river navigation. The Canal du Midi, 154 miles long, connects the Garonne with the Mediterranean. Bordeaux has always been celebrated for its wines, which forms the staple article of commerce.

BARGAIN-HUNTERS.



HERE is a large class of persons who are so inveterately prone to bargain-hunting, that they seldom or never purchase anything of an abateable nature which

they do not cheapen as much as possible. This habit is not so much attributable to any lack of means in the buyers, as to a childish love of obtaining a maximum quantity at a minimum value, which affords them the additional gratification of boasting afterward of their bargains, and complimenting themselves on their own shrewdness. With such persons the purchase of sixpennyworth of oranges is as eagerly seized to gratify their favorite propensity as the order for a set of plate ; and we have known instances of individuals, possessed of ample pecuniary resources, so confirmed in this habit, as to wander in anxious uncertainty from stall to stall before they could decide the momentous question as to which was the most eligible pennyworth of apples.

This habit of bargain-hunting, while we laugh at it for its folly, deserves to be denounced for its mischief. It holds out a premium to unfair trading, to trickery and lying : it is a cruel oppression of him who buys upon him who sells, and powerfully assists in lowering the hard-earned wages of the poor mechanic. The manufacturer is compelled, in order to gratify the morbid love of cheapness, to produce

goods of the most trashy and useless description, and to reduce the wages of those whom he employs to the lowest fraction. The shopkeeper, in order to secure this description of customers, is forced to adulterate his articles; to profess them to be what he knows they are not; to exert himself, by short weight, lying puffs, inferior substitutions, and a thousand unworthy artifices, to keep on a fair equality with his neighbors. No sooner does a new shop open, the owner of which professes to sell cheaper than usual, than he is patronised by the bargain-hunters, to the great injury and often ruin of his more conscientious competitors. Whether he himself ever intend to pay for his stock is not inquired into; whether he intend to pursue an honest and honorable course is held to be no business of the customers: he sells cheapest, and this supersedes every other consideration. The consequence too often is, that the bargain-offering tradesman, after having injured many a respectable shopkeeper around him, suddenly decamps at the expiration of a few months, and the secret of his bargains is at length apparent; namely, that never having intended to pay for the goods himself, any receipt must be a clear gain to him, and he could thus afford to sell at prices which must be ruinous to the upright dealer.

This cheapening mania exercises also a most pernicious influence in producing distrust, duplicity, and unmanly feeling, between seller and buyer. The seller, sharpened by past experience, is in self-defence compelled, in order to obtain a remunerating profit, to ask more than the real value of the article, in order to leave room for the abatement which he expects as a matter of course to follow. The offer by the buyer of less than is asked is really an insult, for it virtually implies that the seller is either a fool or a rogue—a fool to take so little, or a rogue to ask so much; and thus the straight-forward honesty and integrity which should characterize dealings in the market or the shop, as much as anywhere else, is set aside, and seller and buyer meet together with a feeling that confidence and honor are out of place there, and that cunning and overreaching are among the recognised

moralties of trade. The seller, while he introduces the article to his customer, feels a conviction that unless he adds an untruth to the specification of the price, unless an assertion is made or a warranty given which it would be absurd to believe, the article will be rejected, and the hesitating customer will not purchase it, but patronise some other less scrupulous tradesman. The bargain-hunter, on his side, turns the article over in a contemptuous manner, exerts his ingenuity to find some fault in it which shall afford a pretext for a lower offer, and having found a real or an imaginary one, bids something below what he often must know is its real value. The poor tradesman wants ready money, the article really cost him more, he knows of other shops where it may be had at that price, and, with a sickening heart and an inward condemnation of the selfishness of man, he accepts the offer, and the purchaser departs with his bargain. But, strange metamorphosis, the article so recently pronounced almost worthless, the purchaser now boasts of as excellent, worth double the money, and delights to hear his friends innocently express their surprise how it could possibly have been made for the price. Such a mode of dealing is unmanly, ungenerous, and unjust, and requires but to be candidly considered to be denounced by all who think and feel rightly.

The influence of this pernicious system upon the laboring part of the community is cruel and disastrous. We see every few days deplorable accounts of women who are compelled to sew for the merest pittance, and the shopkeepers are denounced for their cruelty. But the blame, we are persuaded, lies less with the immediate than the remote employers. The public, which vents its anger on the shopkeeper, is the real transgressor; for the dealer merely obeys the popular demand. Pressed upon by the insane cry for low-priced articles, as well as by a general competition, the manufacturer and shopkeeper, if they would do business at all, must reduce their expenses to the lowest point in order to obtain any profit, and to this end are compelled to wring from their workpeople the utmost amount of work for the least possible remuneration. Un-

reasonably protracted hours are resorted to, toil is not allowed to cease with the day, the labor of the woman is introduced to supersede that of the man, and that of the child to supersede both, education is necessarily neglected, deformity produced, stimulants resorted to, vicious habits formed, and squalor and disease are induced; and all this too often that the purchaser may procure an article at a fractional abatement. The occasional subscription and the cold donation of charity are but a poor reparation for depriving the workman of his honest earnings, and the manly independence of pocket and of character which it is so desirable he should possess. It is true that the payment of fair prices by the buyer will not always secure fair remuneration to the operative, but the habit of cheapening must have a tendency to lower wages and inflict misery on the producers.

The pernicious practice of bargain-hunting is by no means confined to the rougher sex. It is to be lamented that the practice is far too common among that sex whose kindness of heart and sensibility need no eulogy, and whose propensity in this respect we can attribute to no other source than thoughtlessness. It is perhaps also partly to be accounted for by the fact, that females generally have less money at command than men, and therefore when they spend it are perhaps somewhat more unreasonable in their exchanging expectations. A little thought as to the amount of misery to others which must result from the gratification of this propensity, would surely be sufficient to convince them of its unreasonableness and inhumanity. Little do ladies think, while they are cheapening the thread and the tape, or the shawls, or the linens, they purchase, how much poverty and misery they are assisting to entail on the sickly operative who makes them, and how much of the ignorance and destitution and vice, the bare mention of which shocks their sensibilities, is traceable to this baneful practice.

The habit we have denounced is also very fallacious in a pecuniary point of view. The most shrewd and practised cheapener is often deceived, and finds, after he has secured the bargain, that, to

use the common phrase, "it is too cheap to be good," or that he did not really want it, and therefore it was dear at any price. He discovers too late that what he has bought was made to be looked at rather than used, to deceive rather than satisfy, and that the little he gave for it was far too much for *such* an article, as it was really worth nothing. The cheapest things may be very dear, and the dearest very cheap, and good articles can not reasonably be expected at any other than fair prices. Independently therefore of the injury which the habit of cheapening inflicts upon the workman, it is deceptive and unprofitable even to the purchaser. The prices of shopkeepers are certainly not always to be paid without demur, for this would be to hold out a premium to imposition and extortion, but there should be considerateness on the part of the purchaser as to what ought to be the fair price of such an article. To deal as much as possible with tradesmen who are known for their integrity and uprightness, without being seduced by every unprincipled adventurer who professes to be "selling off under prime cost," and closing business at a "tremendous sacrifice," will be found in the long-run not only the truest economy, and the most satisfactory to the purchaser, but also the most advantageous to the wellbeing of society and the general interests of honesty and honor.

A HABIT OF OBSERVATION.

THE means of exciting thought and reflection are not confined to books. Nor is intellectual progress confined to the study of books. The whole world, both of nature and of man, is full of instruction, and if studied, it will not only fill the mind with knowledge, but will afford that intellectual exercise which will promote intellectual development. If then you have formed the habit of observation, you will never be at a loss for employment for your thoughts. Every person you meet will, in the peculiarity of character presented, afford food for thought; every event of providence, and every object of nature, will thus be the means of intellectual development. But what is the habit

of observation ? It is not merely the looking at things, but the habit of thinking and reflecting upon what you see. The man of observation is not the man who has actually seen the greatest number and greatest variety of objects ; he is the man who has reflected the most carefully upon what he has seen, and in this way, derived the most valuable instruction from them. What we would have you seek is the habit of inquiry, and thought, and reflection, in regard to every object that may be presented to your notice, seeking the peculiarities, inquiring the causes, learning the effects, and tracing the relations and connexions of one circumstance, event, or object, with another. In this way you will be constantly making improvement—your intellectual powers will be constantly acquiring new strength and greater freedom and more full development. Form, then, the habit of close, accurate observation, and you will be possessed of a powerful instrument for intellectual improvement.

Nay more, this habit will have a further and more extensive influence. If you can employ your mind in thinking about the objects you have seen, you can also, under the influence of the same habit, employ it in thinking about the lectures and discourses which you have heard. And who is it that derives the greatest profit from what he hears ? Not the one who hears the most or listens with the deepest interest at the time. But he who thinks most carefully of what he has heard after he has done hearing. And here is the point where many fail, and the reason that they do not derive so much improvement as they might otherwise from the lectures and discourses which they hear. They hear with interest and with pleasure, but when they have done hearing, they turn their thoughts to other things. What they have heard is soon gone from their minds, and no distinct and lasting impression is left. But if they would think over what they have heard, or talk it over with their companions, or write out an abstract, they would make it more entirely their own, they would gain much valuable knowledge, which they now let slip, and they would acquire by the means great intellectual strength and development.

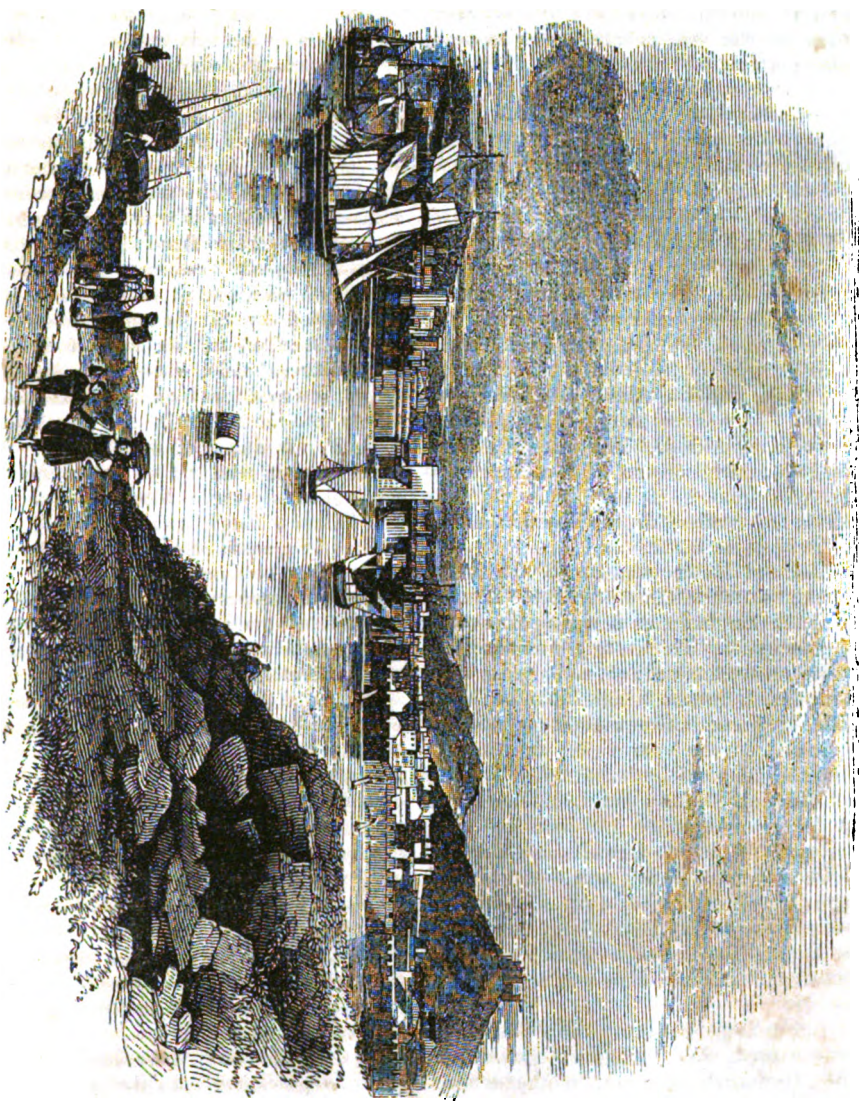
MARSEILLES.



MARSEILLES, the great seaport of France on the Mediterranean, was founded six centuries before the Christian era, by the people

of Phoecea, a Greek colony of Asia Minor. It soon flourished, and its inhabitants formed minor settlements on the coasts of Gaul, Spain, and Italy. From its earliest infancy Marseilles has been an important place of maritime commerce. The soil in its neighborhood is sterile, and does not bountifully repay the labors of the cultivator. This circumstance, and the advantageous position of Marseilles, naturally diverted the energies of its population to trade. At the present time a fifth of the customs' duties collected in France, or nearly \$5,000,000, is contributed by Marseilles ; and its commerce is increasing, the occupation of Algiers by the French having brought the trade with that part of Africa into the hands of the Marseillaise. There are many soap manufactories and tan-yards at Marseilles. The refining of sugar is an important branch of industry. The trade in perfumery and olive-oil is also considerable. The exports of Marseilles consist of colonial produce, brandy, wine, liqueurs, syrups, preserved fruits, capers, anchovies, oil, soap, verdigris, perfumery, madder ; manufactured goods, consisting of light woollens, silks, shawls, ribands, gloves, hardware, &c. ; and the chief articles of import are sugar, coffee, cotton, indigo, pepper, iron, dye-woods, hides ; and, when the trade in grain is active, wheat from the Black sea, Sicily, Italy, and Africa. The harbor is in the heart of the city, capacious and sheltered, but it does not admit vessels of the larger class ; and as the accumulation of refuse from the shipping is not carried away by tides (the Mediterranean tides being scarcely perceptible) the port is frequently offensive. The form of the harbor resembles an elongated horse-shoe : the entrance is defended by forts

Port of Marseilles.



placed opposite each other. The lazaretto occupies an area of above 278,000 square yards, and is considered the finest establishment of the kind in Europe: the quarantine regulations are severe, but a general revision of these laws for the countries on the Mediterranean is likely to take place.

CONCISE HISTORY OF THE ENGLISH BIBLE.



THE history of the English Bible comprehends a period of nine hundred years. The venerable Bede translated the Psalter and the gospel into the Anglo-Saxon, by order of King Alfred. The price of a Bible in 1274, fairly written, with a commentary, was from \$150 to \$250, though in 1840, two arches of the London bridge were built for \$123.

Richard Rolles was one of the first to attempt a translation of the Bible into the English language, as it was spoken after the conquest. He wrote a paraphrase in verse on the book of Job, and a gloss upon the psalter, but the whole Bible, by Wickliffe, appeared between 1360 and 1380.

A bill, in the year 1490, was brought into the house of lords, to forbid the use of English Bibles; but it did not pass. A decree of Arundel, archbishop of Canterbury, in 1403, forbade unauthorized persons to translate any text of Holy Scripture into English, as well as prohibited the reading of any translation till approved of by the bishops, or a council. Several persons were burned for reading the word of God.

In the reign of Henry the Fifth, a law was passed, that "whoever should read the Scriptures in their mother-tongue, should forfeit land, cattle, body, life, and goods, from their heirs for ever, and be condemned for heretics to God, enemies to the crown, and most arrant traitors to the land." And between 1461 and 1493, Faust, or Faustus, who undertook the sale of Bibles at Paris, where printing

was then unknown, narrowly escaped punishment. He was taken for a magician, because he produced them so rapidly, and because one copy was so much like another.

The Latin Vulgate, printed at Mayntz, in 1462, was the very first printed edition of the whole Bible in any language, bearing the date and place of its execution, and the name of the printer. The first printed edition of the Holy Scriptures in any modern language, was in German, in the year 1467. The New Testament by Luther, revised by Melancthon, appeared in 1521. William Tyndal, in 1526, printed his English Testament at Antwerp; but those who sold it in England, were condemned by Sir Thomas Moore, the lord chancellor, to ride with their faces to the horses' tails, with papers on their heads, and to throw their books and themselves into the fire at Cheapside. Tyndal himself was strangled and burned. His dying prayer was, "Lord, open the king of England's eyes." John Fry, or Fryth, and William Roye, who assisted Tyndal in his Bible, were both burned for heresy.

Cranmer obtained a commission from the king to prepare, with the assistance of learned men, a translation of the Bible. It was to be printed at Paris; but the inquisition interfered, and 2,500 copies were seized, and condemned to the flames. Some of these, however, being, through avarice, sold for waste paper, by the officer who superintended the burning, were recovered, and brought to England, to the great delight of Cranmer, who, on receiving some copies, said that it gave him more joy than if he had received two thousand pounds. It was commanded that a Bible should be deposited in every parish church, to be read by all who pleased, and permission at last was obtained to all subjects to purchase the English Bible for themselves and families.

In the year 1535, Coverdale's folio Bible was published. In the reign of Edward the Sixth, new editions appeared. In Mary's reign, the gossellers, or reformers, fled abroad, but a new translation of the New Testament, in English, appeared at Geneva, in 1587, the first which had the distinction of verses, with figures attached to them.

A quarto edition of the whole Bible was printed at Geneva, 1560, by Rowland Harte. A New Testament in Welsh, appeared in 1569; the whole Bible in 1588, and the English translation, called the Bishop's Bible, by Alexander Parker, in 1568. It was 1582 that the Roman Catholic Rhemish Testament appeared, and in 1609 and 1610, that their Doway Old Testament was printed. In 1607, was began, and in 1611 was completed, a new and more correct translation, being the present authorized version of the Holy Scriptures, by forty-seven learned persons (fifty-four were appointed), chosen from the two universities. This edition has been truly styled, "not only the glory of the rich, and the inheritance of the poor," but the guide of the wayworn pilgrim, the messenger of grace, and the means of knowledge, holiness, and joy to millions.

DUTIES TO SOCIETY AND OURSELVES.



HE truly polite must be an habitually cheerful person. But cheerfulness, it will be said, is a matter of temperament and of circumstance. Then if we possess it not, we should cultivate it as a duty.

There is no word in our language more commonly used, nor any one less defined or less understood than "happiness." It is sometimes taken to mean pleasurable sensations derived through the senses; sometimes it means a peculiar state of mind. Perhaps it is easier to tell what happiness is not, than what it is. The most perfect health is not happiness unless one has something to do. Health and riches do not make one happy. These accidents of being rather excite cravings for enjoyment. They are means, not ends. A rich man can ride but one horse, or sit but in one coach, or eat but one dinner, or wear but one suit of garments, or live but in one house at a time. Persons in moderate circumstances can do the same.

Health, riches, power, and distinction, do not make happiness. Distinction is troublesome: it has more pains than pleasures: it is jealous, envious, and distrustful. Power does not make one happy; it demands the most busy watchfulness to keep it. If lost, its absence is often followed by painful suffering, and the possession of it is always accompanied by the fear of losing it. Riches are sometimes regarded as means of enabling one to live in elegant luxury, and even in voluptuous enjoyment. This is no way to be happy; the appetites soon become satiated; the stomach wears out; the senses are palled; diseases come; the body may be racked on a velvet couch as well as on a straw bed.

Is there, then, any such thing as happiness? There must be such a thing, or the laws of nature, which provide for physical, intellectual, and moral being, are false and deceitful, and the gift of revelation is a fable.

If there be such a thing as happiness, it will be found in that knowledge of and obedience to the laws of nature which make health, physical and spiritual. It will be found in obeying the propensity to action, to some continuous, useful end; that is, in pursuing reasonably some one of the many vocations in society which tend to secure one's self respect and peace of mind, and which tend also to the common good.

But there may be disappointments, ill luck, and causes of mortification and sorrow. These, we apprehend, do not seriously disturb any well-regulated mind when there is a consciousness that no reasonable foresight or prudence would have discovered and prevented the cause.

Perfect happiness in this world, it must ever be remembered, is not to be expected: the only happiness that we can really attain consists in a certain contented tranquillity of mind under all the shocks and changes of this mortal life. There is a point called the *happy medium*; and this should be an aim in all human arrangements. Be moderate in all things.

For example, to take no amusement is bad, for it deprives the mind of needful rest and recreation; so likewise it is bad to be altogether given up to amusement,

for then all serious objects are lost sight of. The true plan is to take amusement in moderation.

Some minds have never awakened to a taste for poetry, fiction, the imitative arts, and music, and they thus lose much pleasure, which others enjoy; again, there are some in whom nature has implanted and use cultivated so strong a predilection for these things, that it becomes a vice.

To be too much in society, is sure to deteriorate the human character, making it frivolous, and incapacitating it for taking abstract and elevated views: on the other hand a perfectly solitary life weakens the mind, lays it open to odd fancies and eccentricities, if not to hypochondria, and ends in some instances by altogether throwing it from its balance. The medium is here also found salutary.

To be extravagantly gay, in a world where so many evils lurk around our every step, and so many onerous things claim our attention, is wrong; so is it to be always serious, seeing that the world also contains the materials of much happiness. What is proper is, that we should be uniformly cheerful without letting our cheerfulness run into frivolity, or, if we have cause to grieve, that we should grieve in moderation, believing that a benignant Providence will make all right in the end.

THE NATIONAL GALLERY OF ENGLAND.



THE British National Gallery, like the museum, arose out of the collection of a private individual. The only difference is, that Sir Hans Sloane directed his museum to be offered, after his death, to the nation on payment of a specified sum; but Mr. Angerstein merely ordered his pictures to be sold for the benefit of his heirs, not contemplating, perhaps, that they might form the nucleus of a national collection.

John Julius Angerstein was born at St. Petersburg, in 1735, and came to Eng-

land when he was about fourteen years of age, under the care and patronage of an eminent English Russian merchant, Andrew Thompson, Esq. He rose ultimately to be one of the most conspicuous merchants of London. In his character he united prompt and active business habits to an urbane and a cheerful disposition, having the ability to acquire wealth, and a heart to use it. In gratifying his taste, by collecting rare and valuable pictures, he was greatly aided by the advice of the late Sir Thomas Lawrence, with whom he was intimate. Mr. Angerstein died on the 22d of January, 1822; and in the following year his gallery of pictures was bought by government for the sum of 57,000*l*.

There appears to have been a common opinion entertained that the gallery about to be formed was to be placed in connexion with the British Museum. Apparently acting on this supposition, in the year 1823, the late Sir George Beaumont presented to the trustees of the museum a collection of pictures; and another collection of ancient pictures came into their hands in 1831, in pursuance of the will of the Rev. Holwell Carr, who directed that they should be placed in the same building with those of Mr. Angerstein and Sir George Beaumont. As the National Gallery has been made a separate institution from that of the British Museum, it so happens that the pictures are thus vested in two different sets of trustees, on behalf of the public.

The pictures forming the National Gallery had been kept in Pall Mall: but different proposals were made at various times for the purpose of obtaining an eligible building to receive them. At last, when the King's Mews at Charing Cross was about to be pulled down, and the site built upon for shops, Mr. Wilkins suggested the propriety of appropriating the space for a national gallery, if one was intended to be built. The idea was approved; and in 1832 parliament voted 50,000*l*. for the erection, and in 1835, 12,000*l*. more. Mr. Wilkins was appointed architect, and the building was rapidly completed.

In the view given, the engraver has introduced a design for ornamenting the



View of the National Gallery in London.

centre of Trafalgar Square. But we are not aware that anything has yet been decided upon with respect to it.

The number of pictures at present in the Gallery is over two hundred. Such a collection, it is obvious, can only be but the commencement of a *national gallery*. Though the collection be small and confined, it contains some pictures of the very highest order; and, as a whole, it is a superior one, and quite worthy of forming a *beginning* to a collection intended for a nation such as Great Britain.

Of the more remarkable of the pictures may be mentioned, the "Raising of Lazarus," by Sebastian del Piombo, painted by him in 1518-'19, in competition with Raffaele, then employed on his picture of the "Transfiguration." This very remarkable picture is declared to be the second in the world. For the purchase of the two large Correggios, in 1834, parliament granted the sum of 11,550*l*. The first of these pictures is the original "Ecce Homo" of Correggio. The subject may be understood by the title—"Ecce Homo"—"Behold the Man!" (John xix. 5.) It is difficult to say anything about this wonderful production of art, so as to convey a right idea of it to those who have not seen it. The other picture is also an admirable one; the subject is—"Mercury teaching Cupid to read."

It is unnecessary, at present, to specify other pictures in the Gallery by Rembrandt, Rubens, Claude, &c. Of remarkable productions by English painters, there are Sir Joshua Reynolds's picture of Lord Heathfield, with the keys of the fortress of Gibraltar; Gainsborough's "Market Cart;" Wilson's "Land-storm, with the story of Niobe;" and the well-known productions of the two Anglo-Americans, Benjamin West and Copley, the father of the present Lord Lyndhurst, namely, "Christ healing the Sick," and the "Death of the Earl of Chatham." To these may be added the series of "Marriage à la Mode," and Wilkie's "Blind Fiddler." There is rather a pleasing circumstance to be mentioned, connected with the gift of this last picture to the National Gallery. Sir George Beaumont, presented, in 1823, to the trustees of the British Museum a collection of pictures,

but requested permission, in 1826, to withdraw two, which he deemed unworthy of being placed in a national gallery, and to substitute two others for them, one of them being this picture of Wilkie's.

The National Gallery is open the first four days of the week to the public, and the other two to artists.

ANIMAL HUMANITY.



It is extremely curious to observe in animals ways and doings like those of human beings. It is a department of natural history which has never been honored with any systematic study; perhaps it is thought too trifling for grave philosophers. We must confess, however, that there is some value in the inquiry, as tending to give us sympathies with the lower animals, and to dispose us to treat them more kindly than we generally do.

The *sports* of animals are peculiarly affecting. It is reported by all who have the charge of flocks, that the lambs resemble children very much in their sports. In the mellowed glory of a July evening, while the ewes are quietly resting in preparation for their night's sleep, the lambs get together at a little distance, perhaps in the neighborhood of a broomy knoll, and there begin a set of pranksome frolics of their own, dancing fantastically about, or butting, as in jest, against each other. The whole affair is a regular game at romps, such as a merry group of human youngsters will occasionally be allowed to enjoy just before going to bed. It is highly amusing to witness it, and to trace the resemblance it bears as to human doings; which is carried sometimes so far, that a single mamma will be seen looking on close by, apparently rather happy at the idea of the young folks being so merry, but anxious also that they should not behave too roughly; otherwise, she must certainly interfere.

Monkeys have similar habits. In the countries of the Eastern Peninsula and

Archipelago, where they abound, the matrons are often observed, in the cool of the evening, sitting in a circle round their little ones, which amuse themselves in various gambols. There is a regard, however, to discipline: and whenever any foolish babe behaves decidedly ill, the mamma will be seen to jump into the throng, seize the offender by the tail, and administer exactly that extreme kind of chastisement which has so long been in vogue among human parents and human teachers.

That there is merriment—genuine human-like merriment—in many of the lower animals, no one can doubt who has ever watched the gambols of the kid, the lamb, the kitten, or the dogs, which—

“Scour away in long excursion,
And worry other in diversion.”

But there is something to be observed in these sports still more human-like than mere sport. The principle of *make-believe*, or just as opposed to earnest, can be discerned in many of their merry-makings.

The *kindly social acts of animals*, among themselves and toward mankind, is also an interesting subject of observation. A few months since some workmen, engaged in repairing the cathedral of Glasgow, observed an unusual concourse of sparrows coming regularly to a hole in one of the slanting walls, and there making a great ado, as if feeding some birds within. Curiosity being at length excited, the men proceeded to examine the place, and found that a mother-bird, after the flight of her brood, had got her leg entangled in some of the threads composing her nest, so that she was kept a prisoner. The leg was visibly swollen by the chafing produced by her efforts to escape. In this distressing situation the poor bird had been condoled with and fed by her fellows, exactly as a human being might have been in similar circumstances.

SCRAPS OF CURIOUS INFORMATION.

THE atmospheric pressure on the surface of the earth is near 15lbs. per square inch. The weight or pressure of water, is about seven ounces per square inch for every foot of its depth—845 cubic feet of

atmospheric air, are as heavy as one *cubic foot* of water. The bones of birds are hollow, and filled with air instead of marrow. The flea jumps 200 times its own length, equal to a quarter of a mile for a man. The Romans lay on couches at their dining tables on their *left arms*, eating with their right. The walls of Nineveh were 100 feet high, and thick enough for three chariots abreast. Babylon was 60 miles within the walls, which were 76 feet thick and 300 feet high. The earth is 7,916 miles in diameter, and 24,880 miles round. Forests of standing trees have been discovered in Yorkshire, England, and Ireland, imbedded in stone. A man is taller in the morning by half an inch than he is at night. The atoms composing a man are supposed to be changed every forty days, and the bones in a few months. Fossil remains on the Ohio proves that it was once covered by the sea. When the sea is of a blue color, it is deep water; when green, shallow. Book-keeping, by double entry and decimal arithmetic, was invented in 1501. Pocket watches were first introduced into England, from Germany, in 1501. The color of the mourning dress among the Chinese and Siamese, is white; with the Turks blue and violet; Ethiopians gray; Peruvians mouse-color; Japanese white; Persians brown, and Egyptians yellow. The human body can be brought to endure a heat of 280 degrees of Fahrenheit. The experiment has been tried successfully in this country. In the year 1510 a shower of stones fell at Padua, Italy. One of these stones weighed 120 pounds.

A box 24 inches by 16 inches square, and 22 inches deep, will contain a barrel, or 10,752 cubic inches.—A box 16 inches by 16 8-10 inches deep, will contain a bushel, or 2,150 4-10 inches.—A box 12 by 11 2-10 inches square and 8 inches deep, will contain a half a bushel, or 1,075 cubic inches.—A box 8 inches by 8 4-10 inches square and 8 inches deep, will contain 1 peck, or 237 8-10 cubic inches.—A box 8 by 8 inches square, and 4 2-10 inches deep, will contain one half peck or 268 8-10 cubic inches.—A box 4 inches by 4 inches square, and 4 2-10 inches deep, will contain one quart, or 67 2-10 cubic inches.

THE END OF FOUR GREAT MEN.

THE four great personages who occupy the most conspicuous places in the history of the world, were Alexander, Hannibal, Cæsar, and Bonaparte.

ALEXANDER, after having climbed the dizzy heights of his ambition, and with his temples bound with chaplets dipped in the blood of countless millions, looked down upon a conquered world, and wept that there was not another world for him to conquer, set a city on fire, and died in a scene of debauch.

HANNIBAL, after having, to the astonishment and consternation of Rome, passed the Alps, and having put to flight the armies of the mistress of the world, and stripped "three bushels of golden rings from the fingers of her slaughtered knights," and made her foundations quake, fled from his country, being hated by those who once exultingly united his name to that of their God, and called him Hani Baal, and died at last by poison administered with his own hand, unlamented and unwept, in a foreign land.

CÆSAR, after having conquered eight hundred cities, and dying his garment in the blood of one million of his foes, after having pursued to death the only rival he had on earth, was miserably assassinated by those he considered his nearest friends; and in that very place, the attainment of which had been his greatest ambition.

BONAPARTE, whose mandates kings and popes obeyed, after having filled the earth with the terror of his name—after having deluged Europe with tears and blood, and clothed the world in sackcloth, closed his days, in lonely banishment, almost literally exiled from the world, yet where he could sometimes see his country's banner waving over the deep, but which did not nor could not bring him aid.

Thus these four men, who seem to stand the representatives of all those whom the world call *great*—these four men, who each in turn made the earth tremble to its very centre, by their simple tread, severally died—one by intoxication, or as was supposed, by poison mingled in his wine—one a suicide—one murdered by his friends—and one a lonely exile. "How are the mighty fallen!"

HOROLOGY.



OROLOGY, or the art of measuring time by hours, minutes, and seconds, was known and practised in very early times; but for its connexion with correct me-

chanics we are indebted to the monks of the middle ages. The word *horologium* was in use among the ancients, which fact has led many to infer that mechanical contrivances similar to our clocks, were then in use. This inference is doubtless erroneous, since no ancient writer ever alludes to an instrument of that kind. The *pillar*, the engraved *dial*, the *clepsydræ*, and the *hour-glass*, were the only horologii known prior to the sixth or seventh century.

Pillars, the length, inclination and return of whose shadows, indicated the progress of time upon the level surface around their bases, were doubtless the first time-measurers. It is believed (although we have no positive evidence of the fact) that the obelisks of Egypt were used for this purpose; and some have hazarded the opinion that the pyramids were also put to the same use, as their four sides correspond precisely with the cardinal points of the compass. It is certain that pillars were used in Greece for this purpose; and as Augustus thus used the Egyptian obelisks which he carried to Rome, this fact may be taken as *circumstantial* evidence, that for this purpose they had been devoted when first reared.

These huge *dials* were succeeded by those of a more portable kind. The invention of the dial proper, is conceded to the Babylonians, although the first mention of one on record, refers to a famous one that belonged to Ahaz the Jewish king, who reigned about seven hundred years B. C. "And Isaiah the prophet cried unto the Lord: and he brought the shadow ten degrees backward, by which it had gone down in the dial of Ahaz." 2 Kings xx. 11. As the Jews were by no means an inventive people, it is sup-

posed that Ahaz procured this horologium at Damascus, where he obtained an altar and other curious things.

Of the construction of this dial we have no certain means of determining, but it is probable that it was similar to that introduced to the knowledge of the western nations by Berosus the Chaldee. The Rabbins says that it was a concave hemisphere, in the middle of which was a globe, whose shadow fell upon twenty-eight lines engraved upon the cavity. This description accords with that of one attributed to Moses and Apion. He says that Moses made a cavity and near it set a pillar, the shadow of whose top fell into the cavity and passed round it with the sun, thus marking the hours. Josephus pronounces this relation of Apion, false. Anaximander, who first introduced the dial into Greece, obtained a knowledge of it in Chaldea, about the time of the Jewish captivity. The dial of this traveller not only marked the hours, but the equinoxes, the solstices, and by their means, the seasons. Such dials were used by the Egyptians, and though chiefly employed as equinoctial dials in astronomical calculations, yet they were used for horary indications. All of these were hollow or hemispherical, as represented in fig. 1 of

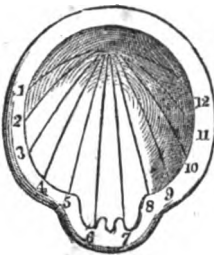


Fig. 1.

our engravings. This dial was found at Ravenna, about one hundred years since, and appeared mounted on the shoulders of a Hercules.

Figure 2 represents a large marble sundial once upon the point of a rock near the monument of Thrasyllus at Athens. It is supposed by some to represent the one whose invention is attributed to Berosus, beforenamed, who lived in the time of Alexander; while others, guided by the meager remarks of Vitruvius (who, in

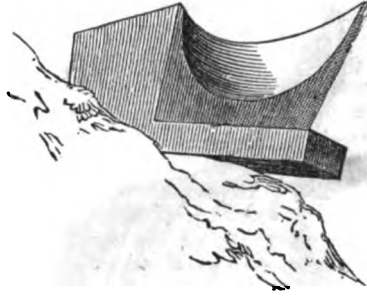


Fig. 2.

speaking of the dial of the Chaldean, calls it a *hemicyclium* or half-circle), believe that either of the two following figures better represents the dial of Berosus.

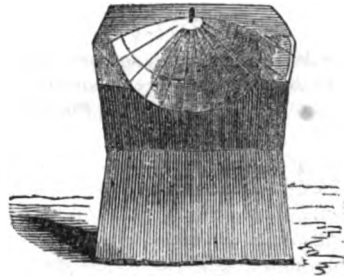


Fig. 3.

Figure 3 is copied from the "Antiquities de Herculaneum" and represents a dial formed of white marble, supposed to be of Etruscan construction. It was found at Civita in 1762. It is one of the most primitive class, and like fig. 4 so nearly resembles those of Chaldea, that most antiquarians agree that these, the dial of Berosus, and the dial of Ahaz, are all the same in form.

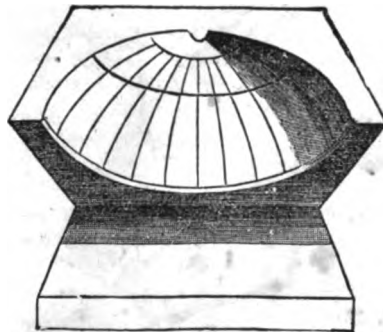


Fig. 4.



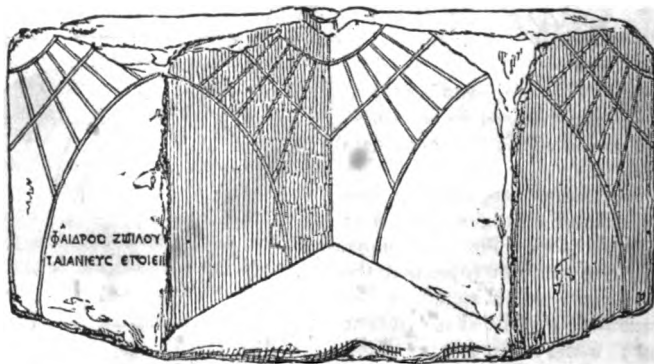
Fig. 5.

Our fifth illustration represents a singular kind of dial which was used by both the Greeks and Romans. How antique its origin is, we can not determine. This was found at Herculaneum, in 1754, and in 1755, a similar one was dug up at Portici. The one represented in our engraving, is in the form of a ham, the tail serving as a gnomon or object for casting a shadow, and having at the extremity a hook or ring for suspending it. The dial is on the back of the ham, where seven vertical lines are engraven, under which, in abbreviation, are the names of the twelve months, commencing with January. Six horizontal lines intersect the vertical ones and show the extent of the shadows cast by the gnomon on the sun's entering each sign of the zodiac. The hours of

the day are also pointed out by these intersections, the shadow descending with the rising and ascending with the setting sun.

Our next illustration represents a compound dial, which exhibits dials on four different faces of the stone. It was found at one of the ancient cross-ways of Athens, where it is supposed to have been erected for the public good. It is now in the British Museum among the collection of antiquities known as the Elgin marbles.

We have space only to give the general rules to be observed in the construction of dials, which are applicable to them all. Suppose 12 planes, making with each other, angles of fifteen degrees, passing through the axis of the earth and dividing the sphere into 24 equal parts, one of these planes being the meridial of the place of the observer; commence from the meridial and moving toward the west, number these planes 1, 2, 3, 4, &c., up to twelve, which will be the lower meridian of the place; commencing from this point, number as before, 1, 2, 3, &c., to 12, which will now fall on the upper meridian. These will form a series of horary circles, in passing from one of which to the next, the sun will occupy one hour. At noon it will be on the meridial numbered 12; an hour previous it was on the last horary circle preceding, and it was 11 o'clock; an hour after, it will be on another circle representing 1 o'clock and thus it proceeds till the time of setting, and commences again at its rising. Suppose now an opaque plane, passing through the centre of the earth, and intersected by the



Compound dial of Athens.

twelve planes in as many diverging straight lines, and mark these lines with the numbers belonging to their respective planes. This opaque plane will represent the face of a dial, the straight lines will form the horary lines marked on its surface, and the style, or gnomon, will represent the axis of the earth, and will project its shadows successively on each of the hour lines, the number affixed to which will show the hour of the day. This is the theory of dials; and one calculated for any given place, will serve for any other place under the same meridian, provided its position in the latter place be parallel to its position in the former place.

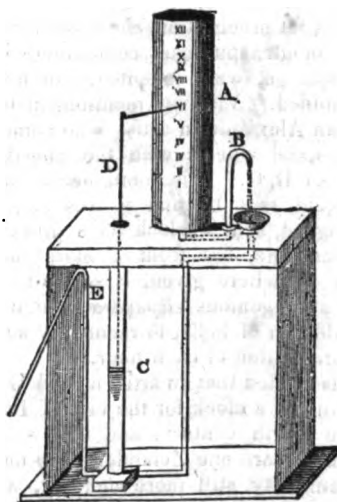
The most simple method for measuring time, next to the *dial* is the *hour-glass*, which was doubtless used prior to the more complicated clepsydræ.

Hour-glasses are made of various forms for the purposes of ornament, but the interior construction of all is necessarily the same. It represents two cylindrical cones of glass, joined at the apex. At the point of conjunction there is a small aperture, just large enough for a certain sized sand in a given quantity to pass through within the space of an hour. This sand is put into one of the cones, and when it has all run out into the other, completing the measurement of the hour, the glass is reversed, and the sand again commences its descent.

The *Clepsydræ* or *water-clock* was brought into use by the Greeks at an early period, probably about the time of Pythagoras. They were first constructed by the philosophers for the purpose of determining, by measuring time precisely, some of their problems; such as the time required for a certain body of a given weight to pass through a medium of given distance and density. Their correctness caused them to be used afterward for the measurement of time. Ctesibius of Alexandria, who flourished about two hundred years prior to the Christian era, spent much time in bringing this instrument to perfection, yet he did not advance it to that point of usefulness to which the Greeks afterward carried it.

The utile portion of the clepsydræ is simple, but the ornamental parts were often made in a complicated and expensive

style. In the earliest water-clocks, which were in principle of action similar to the hour-glass, the indication of time was effected by marks corresponding to either the diminution of the fluid in the containing vessel, during the time of emptying, or to the increase of the fluid in the receiving vessel during its time of filling; but it was found that the water escaped much more rapidly out of the vessel when it was full, than when it was nearly empty, owing to the difference in the pressure of the atmosphere, and it required great ingenuity in adjusting the marks upon the index, so as to correspond with this variation.



Clepsydræ.

The construction of a clepsydræ for the most correct measurement of time is shown in our engraving. The cylinder A on which twelve hours are marked, is hollow, and serves for a reservoir to contain the water. At the bottom is an aperture through which the water passes into the pipe B; this pipe has a very small orifice whence the water escapes with a certain rapidity, and falls into the cup below, having an opening at the bottom similar to the reservoir. From this cup the water flows into the receiving cylinder C in which it rises to a given height each hour. A piece of cork with a wire D attached is placed in this cylinder, and floats on the surface of the water. To

the wire an index-hand is fixed, which, as the cork rises, points out the hours upon the large cylinder. A siphon E is attached, which exhausts the water in the cylinder C as soon as it rises to a certain height, and the indicator falls to figure I, to commence its daily labor again. By increasing the length of the two cylinders, twenty-four hours may be marked and measured, before the clock needs *winding up* by the siphon. When Julius Cæsar invaded Britain he found a kind of clepsydræ in use among the inhabitants of the southern part of the island. They were in common use at that time in Rome, and continued so in Italy, as late as the sixth century of our era.

At what precise time *clocks* or machines for horological purposes, combining wheels and springs, were invented, can not be determined. Vitruvius mentions incidentally, an Alexandrian artist who combined springs and wheels with the clepsydræ, about 41 B. C. It is mentioned in an old chronicle, that Haroun al Raschid, calif of Bagdad, sent a clock as a present to Charlemagne, but from a more minute detail elsewhere given, it seems to have been an ingenious *clepsydræ*, which had the addition of bells, to record by sounds the termination of each hour.

It is related that an artist named Dondi, constructed a clock for the city of Padua, in the fourth century, and that a short time afterward one Zelandier made one for the same city, still more complex, which was repaired in the sixteenth century by Janellin Turrianus, the mechanic of Charles V. These, two, were doubtless improved clepsydræi.

We have no positive proof that clocks, similar to those now in use, were made previous to, or about the commencement of, the twelfth century. Near the close of the eleventh century, William, abbot of Heischan in Saxony "invented," according to his biographer, "a horologium similar to the celestial hemisphere;" and from corroborative testimony, it appears clear that this monk was either the inventor of the modern clock, or was the first to introduce it into Europe.

In the thirteenth century, Sultan Saladin gave a clock to the emperor Frederic II., which was put in motion by weights and

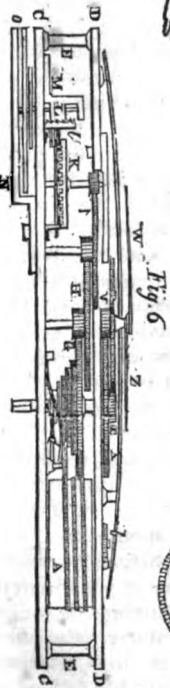
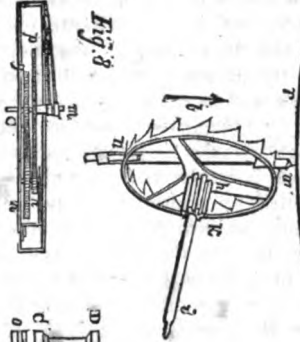
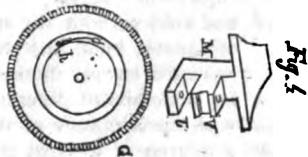
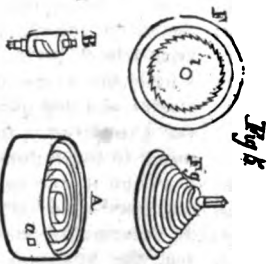
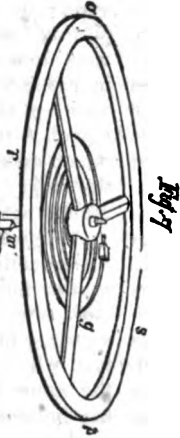
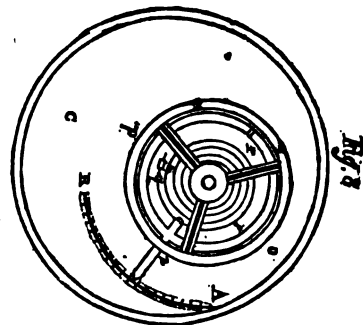
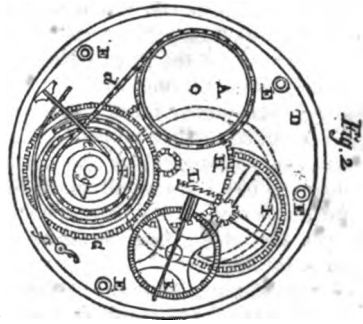
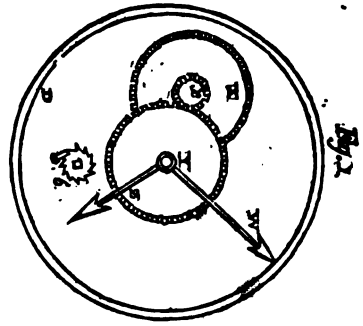
wheels. It marked the hour, the course of the sun and moon, and the planets in the zodiac. On this fact, many authors found a reasonable belief, that clocks were invented by the Saracens, and made known to Europeans in the time of the crusades.

During the sixteenth and seventeenth centuries, great improvements were made in the construction of clocks, many of which exhibited a complication of machinery for the exhibition of automatic figures, as well as sidereal and lunar observations, truly wonderful. Of these, the clocks of Strasburg and Lyons were the most remarkable. The invention of the pendulum, and its great improvements by a combination of metals, advanced the art of clock-making rapidly from the seventeenth to the eighteenth century, and brought it to that perfection and accuracy which it now exhibits.

Watches, or as they may be properly called, portable clocks, came into use in England a short time prior to the reign of Queen Elizabeth. The first watches were not intended to be worn about the person, but were constructed for the convenience of transmission from place to place. A watch in the reign of Elizabeth was about the size of a dessert-plate of the present day. This applies more particularly to one owned by the queen herself. But Shakspeare, who lived during her reign, alludes in his *Twelfth Night* to a watch evidently worn in the pocket. In the reign of Charles I. their dimensions were considerably reduced; but it was not till the reign of James, near the close of the seventeenth century, that pocket-watches came into general use.

Watches were quite common in France and Germany about the middle of the sixteenth century, but they were too unwieldy for pocket service. A German named Huygens and Dr. Hooke, an Englishman, for a long time disputed for the honor of the invention of the watch proper; the majority give the palm to Dr. Hooke.

Our space will not permit us to give a detailed description of the mechanism of modern time-keepers, included under the several names of clock, watch, and chronometer. We introduce an engraving representing the machinery of a common watch, and this will serve to illustrate the



Mechanism of a common Watch.

principle of all other horological machines of the present day.

Figure 1 represents the dial-plate with the hour and minute wheels and indices. X is the minute wheel, Z the hour wheel, and Y the cannon pinion, or a hollow piece of steel which adheres by friction to the arbor of the centre wheel of the watch, and passes through a socket in the hour wheel. At the lower end are leaves or teeth that turn the minute wheel. To the upper square end the minute hand is attached, while the hour hand is fastened to the socket of the hour wheel.

Figure 2 and figure 6 present two views of the machinery of a watch; the first, of all between the plates, the second, of the whole complete. Figure 2 gives the forms of the wheels, and figure 6 their action. In the former, A is the box containing the mainspring; G is the main wheel with the fusee attached; H is the centre or second wheel; I the third wheel; K the contrate wheel turning horizontally with perpendicular teeth; L the balance-wheel; EEE the pillars which connect the plates; d the chain attached to the fusee and mainspring box; e a small piece of steel borne down by a delicate spring f, to prevent the chain from running off the fusee at the top.

Figure 6 represents the action thus: A the cylindrical box containing the mainspring round which the chain is wound connecting it with the fusee. To the fusee the main wheel G is attached, having forty-eight teeth on its circumference, which turns a pinion of twelve teeth, fixed on the arbor of the centre wheel H, so called from its being in the centre of the watch; it has fifty-four teeth which turn a pinion of six teeth, on the arbor of the third wheel I, which has forty-eight teeth; it is sunk in a cavity formed in the pillar plate, and turns a pinion of six, on the arbor of the contrate wheel K which has forty-eight teeth, by which it turns a pinion of six, attached to the balance-wheel L, which has fifteen teeth. One of the pivots of the balance-wheel turns in a frame M, called pottance, and the other pivot runs in a smaller piece called counter-pottance. The teeth of the balance-wheel impel the balance. The arbor of the balance, called the verge, has two small pallets or leaves

projecting from it at nearly right angles; these are acted upon in such a manner by the teeth of the balance-wheel, that, at every vibration of the balance, aided by a fine spring, a tooth of the wheel is allowed to escape or pass by, at the same time giving an impulse to the balance. This part of the watch is called the *escapement* from this fact, and is clearly shown in figure 7. O, p, s, r, indicate the balance, g the hairspring, k the balance-wheel, h the pinion in which the contrate wheel acts, and m, n, the two pallets upon the verge. The arrow l denotes the direction in which the balance-wheel moves.

A, figure 5, is the box with the mainspring coiled up within it. a is a small square hole in which a thick piece of steel, attached to the mainspring is inserted, which holds that end of the spring fast, while by the other end attached to the arbor B, it is coiled up. F, shows the bottom of the main wheel with the ratchet l, and F, g, the fusee on which the chain is wound, and which is attached to the main wheel. Figure 4, shows the form of the pottance. V, is the place for the slide containing the hole for the balance-wheel pivot, and l the bottom on which the verge pivot rests. Figure 8, shows the top plate with the balance o, the hairspring v, the regulator z, and the index to the regulator marked R, A.

When it was ascertained by navigators that good time-keepers were highly useful in determining correctly the longitude at sea, the attention of the mechanics and even of the government itself of England, was turned to the subject of so improving spring clocks, or watches, as to make them capable of enduring the vicissitudes of heat and cold without variation. In the reign of Queen Anne, the parliament offered a reward of twenty thousand pounds sterling, for a method of determining the longitude with the accuracy of thirty miles, or half a degree of a great circle. Harrison, a watchmaker, after great labor and industry, produced a time-keeper which he called a chronometer, that procured him the offered reward. He effected his object in equalizing the contraction and expansion of the spiral spring and balance, by a combination of two metals, of opposite expansions, by which he formed a self-

regulating curb. This principle is now applied to pendulum clocks, with the addition of mercury, placed in a jar which forms the ball of the pendulum. These are the only clocks that will keep time during a whole year, exposed to the vicissitudes of the seasons, without change.

The chronometer has now become an indispensable instrument on board of every vessel. When properly regulated and rated, it is astonishing to witness the accuracy with which they measure time. About five years since, we had charge of one for several months, and from November till the following May, it did not vary quite five seconds from its rate.

NO PERSON UNIMPORTANT.



THE pride of wealth and individual state tend to make many members of the social scene appear extremely unimportant. And, in our ordinary moods, we are accordingly

very apt to feel toward such persons as if they were scarcely entitled to be reckoned as existing. We here commit a great mistake. It would be of little use in this place to show its inconsistency with high doctrines as to the nature and destiny of man, but the same end may be served if it can be shown as fallacious upon the simplest worldly considerations. No member, then, of any body of men can be unimportant, so long as men live in society, for in that state—such are the relations arising from the fact of our all partaking of the same nature—the highest are liable to be affected in some degree in their fortune and happiness by the meanest. So bound up are we together in interests, that what hurts one hurts all, and we really thrive as much in things favorable to our neighbor, as in those bearing immediately upon ourselves.

First, as to a community of bodily qualities. Here the pride of natural endowment, as well as that of conventional dignity, is sadly humbled; for, as is well known, there is not the slightest difference

between the physical constitution of the greatest man and that of the humblest. Both, accordingly, are liable alike to influences calculated to operate injuriously on the bodily frame. When any one asks, therefore, of what earthly consequence to the proud and great is the existence of any particular specimen of the humble, it may be sufficient to point out that an infectious disease affecting the latter may be communicated to the former, and involve both in common ruin. How often has it happened that a beggar has brought to a city a malady which has swept off multitudes of the higher as well as inferior classes! The rising of disease among the miserable classes, and its spreading upward among the affluent, is unfortunately a phenomenon not confined to past periods of history. It is on such occasions that the importance we are all of to each other is brought most affectingly before us. We then see how it might have been of consequence to some family living in easy and elegant circumstances, that some other particular family living in wretchedness, in a distant part of the same town, had been in time succored with a brotherly help, and so redeemed from the danger they were in of proving a bane to all around them. It is a terrible form of admonition, but is it not a just one, considering that we really are one family, and therefore ought to love and cherish one another? The care of the disease which has been allowed to arise, the charge of the helpless dependants of those who have perished—these being exactions so much greater than what would have prevented the evil at first—may well be regarded as penalties incurred by society for its omissions of duty. Man, in his hardness of heart, or under the guidance of false principles, may rebel against these ordinations of Providence; but, till he can change the arrangements by which we all move and breathe, he must choose between the two courses, either to regard all his fellow-creatures as brothers, and to act by them accordingly, or to remain exposed to the many dangers by which, through his neglect of this maxim, he must ever be surrounded.

We may now inquire how the humble become of importance to the rest from a

community of moral constitution. This is simply because moral conditions follow the same law as physical, and that we are thus, as in the former case, enabled to affect each other for good or evil. In the classes called miserable, who are the humblest of all, there must needs be, as a general result, very low moral conditions. Here, indeed, we usually find a concentration of almost all the vices of which our nature is capable. The corruptions spread outward and upward, exactly like a pestilence, and inevitably tend to contaminate the better classes. Even in the necessity which they occasion for a defensive vigilance on the part of their superiors, they do a great injury, for thus are men's hearts shut up, and mutual love and confidence extinguished. Still worse are the results of the penal severities which they call for, for every blow of the sword of Justice tends in some degree to harden the feelings of the community. Thus are the mean made important to the exalted; thus does the moral situation of the poorest and vilest of mankind become a matter of some interest to the very highest, wide as is the social gulf which appears to lie between them.

Let us now see how it stands with regard to an individual against the whole mass of society. There is a tendency in many persons to suppose that they are unimportant to their fellow-creatures, and that their conduct also is unimportant, because they form respectively but *one* out of a mighty number. There could not well be a greater mistake than this, for there is no such thing as a thoroughly detached and isolated individual: we are all inextricably tied up and interlaced with each other; so that no man can live or act without affecting others in some degree, and, to some purpose, concerning their weal or woe. Look alone to the principle of imitation. Through this principle every one is, consciously or unconsciously, modifying the tendencies of all who have opportunities of seeing or judging of him. That disposition which more or less inspires us to walk by some neighboring example, tells powerfully, even by itself, in making everybody's conduct important. Superadded to this, there is a disposition in many to venerate those with whom they

are brought into contact; and where this is the case, there will be a much more powerful tendency to follow the line of conduct exemplified. Who can tell what fascination he may, every moment of his life, be exercising over some humble, though unknown worshippers, leading them right or wrong according as he may chance to act? There are no doubt very various degrees of personal influence; yet it is equally indubitable that hardly any person is so extremely humble as not to be surrounded by some who, either from imitation or veneration, or from a mixture of both, will be affected to good or evil by his example.

Besides this, it is in the very nature of every moral phenomenon to be diffusive. A good or bad act is like a stone dropped in a pool, which sends out a succession of waves all around, until the impulse first given is exhausted. The good act goes forth smiling in the face of mankind, and makes all smile delightedly who see or hear of it; the bad act bursts out with a frown, which darkens all around it. That is to say, when we witness or are informed of an act comprising conscientiousness, kindness, self-sacrifice, magnanimity, or any other noble principle, we naturally are warmed by it into a love of the same good principle, and are strengthened in a wish to do likewise. And when we see or hear of an act comprising inhumanity, base deception, or injustice, we are at the best roused into the exercise of a resentful principle, which, though we may call it honest indignation, does in reality give us no positive advance as moral beings—possibly we are only sullied by the passing of a wave of the muddy waters of error over our minds. Accordingly, that there should ever be a bad deed done, or a foul or harsh word spoken, is a misfortune and an evil to all around—no saying to how remote a shore of society's mighty ocean. A moment sees the deed done or the word issued, and years may not see its waves spent on those distant beaches. Little, and apparently trivial at first, it may so act and react in the sphere which it affects, that at length it comes to be a wide-spread and devouring mischief. Thus is the peace of families daily broken; thus do poor mortals, by momentary slips,

lay up stores of calamity for themselves; thus arise wars and desolations of kingdoms, retarding the coming of good to man indefinitely. If this is a true view of the matter, it follows that no man's conduct is unimportant to society. Individually, we reap the benefit of every good emotion that rises in the bosom of another: collectively, we are punished for the errors of every individual.

If the humblest be thus morally important to the rest, how much more so are those whose position gives them more than the average proportion of influence. All conducts bears an immense increase of consequence when it is connected in the popular mind with rank, wealth, talent, and distinction—usually held in esteem. Great, accordingly, is the responsibility of those so endowed for their every word and deed. Here there can, indeed, be no pretence of the unimportance of individual conduct, for the effects are open, palpable, and universally acknowledged. It would be too much to expect that the claim upon such persons should be in every case carefully regarded, but let its importance at least be as generally impressed as possible. The responsibility seems particularly obligatory where the superiority conferred is that of superior intellect. We there look more expectingly for every form of good, and are the more rejoiced or saddened as our expectation is gratified or disappointed. Pityable, too, is it for the erring spirit himself, for how thoroughly does he thereby balk the design which Providence had formed in his favor! Men of superior intellect are the natural leaders of their species. They have a rank placed before them, to be secured by the right use of their abilities. Their abusing that gift is as thoroughly a casting of precious fortune at their feet, as is the prodigal spending of a miser's hoard by an impatient heir. They might go crowned amidst their fellows, with the palm-trees of triumph waving around them, and they consent to wallow in the mire, to the disgrace of themselves and the pollution of their neighbors.

Let no one, then, ever say to himself or others, I am of no consequence; I am poor and despised, and of no account; or, I am only one among many, and have

no influence. The poorest class tells powerfully on the highest. The despised is a subject of very fair anxiety to the most exalted; and every person, however limited his gifts, is continually operating for good or evil on all around him.

SPECTACLES.



ACCORDING to the best authorities, spectacles consist of two lenses so arranged in frames as to aid defective vision. To this end, and to suit

every sort of visual deficiency, great varieties of the article have been invented. There are magnifying glasses and diminishing glasses, and glasses through which objects appear of their actual size. There are spectacles for daylight, spectacles for candlelight, and spectacles tinted with all sorts of hues, from pleasing pink to a sombre slate-color. Some are constructed to enable the wearer to perceive things which are at a distance; others to increase the distinctness of things which are near; Dr. Wollaston's periscopic spectacles allow of looking sidewise; and De La Court's reflecting glasses make up for the want of eyes in the back of the head, for they reveal what is going on behind backs! Again, viewing spectacles in reference to quality, and as articles of manufacture and trade, there are good, indifferent, and decidedly bad spectacles, the last being made not so much to be seen through, as—like the razors described by Peter Pindar—to sell. These generally give distorted appearances to objects, for the clearer viewing of which they were brought to assist.

It is our purpose in this article to abandon the literal signification of the word spectacles, and to treat the term abstractedly from the actual article which is seen in the shops, in pedlars' packs, and on the noses of our elderly friends. We seek to give greater currency to the more enlarged, though metaphorical sense in

which the word is used by many authors of high repute, both ancient and modern. Thus, Chaucer saith, that:—

"Poverty a *spectacle* is, as thinketh me,
Through which he may his very friends see."

And Dryden, in commenting on the genius of Shakspeare, truly observes, that the great dramatist "was naturally learned—he needed not the *spectacles* of books to read nature." Thus, as a man is sometimes said to "see" that which is invisible, such as a fine thought, the point of a joke, or the force of an argument, so would we draw attention, not to mechanical, but to psychological spectacles—not to those which aid or derange the actual organs of sight, but to those which assist or falsify the mental vision.

These metaphorical spectacles being worn by a large majority of mankind, are in quite as great variety as the spectacles we have described, and suit themselves to every age and condition. Ardent and imaginative youth, for example, on first entering active life, wears spectacles which exhibit everything in the brightest colors. Its keen sense of enjoyment, which makes it feel the mere act of existence to be a pleasure, extracts gratification out of whatever is presented to the senses. Painful feelings, when excited in the young, are transient, and serve rather to heighten the effect of general enjoyment than to lessen it. Worldly experience has yet to darken the glowing picture—to give more truthful, and, alas! less favorable views of mankind, but, on the other hand, to exchange for restless and fevered, more permanent and assured sources of happiness. Hence, to the glowing imagination of such natures it is always summer; and they do not, as in after-life, enjoy the coming of the spring, because they know no winter. To them all men appear good, all nature seems beautiful. Such temperaments see everything *colour de rose*—they wear *pink spectacles*.

These spectacles are by far the most dangerous to the real as well as to the mental perception. "The habitual use of tinted spectacles," remarks an experienced optician, "gives rise to a succession of violent changes of color, which are painful to the unpractised, and must be injurious to those who have become inured

to them." This is exactly the case with the false medium through which the world is often seen by youthful enthusiasm. Many a young man, viewing mankind in too glowing a light, has had some act of human frailty (by which, perhaps, he is made to suffer) unexpectedly revealed to him—has had the pink spectacles suddenly dashed from his vision! Then, in proportion as all was before unduly brilliant and beautiful, all appears now as falsely dark. He is what is called a "disappointed man." His imagination, which at first exaggerated the goodness of mankind, now exaggerates its wickedness. The darkened spectacles which are substituted as much incapacitate him from enjoying the brightness of the sun, as those he previously wore increased it; and he who before saw universal goodness, ceases to believe in benevolence; and the character of every human being appears to be shaded with self-interest or other faultiness. By constantly regarding the shadows of the picture, and those only, he grows old in his fatal uncharitableness, and is reduced to the unamiable condition of a cynic—a Diogenes; but a Diogenes who looks for honest men—not with a lamp, but with a dark lantern—for his vision is obscured with "*clouded spectacles*." Of a similar stamp are those desponding spirits who have a taste for the dismal of this life; who take delight in sighs and sadness, pathetic emotions, and heart-rending woe, and view human nature "through the lens of a tear."

Other varieties of spectacles are very generally worn, which are neither pink nor clouded, but work in matters of lesser importance the effects of both. The wearers of them are never contented with truth and nature simply as they see her. If they have to describe a hill, for example, they will tell you the ascent is almost perpendicular, and make reference to the Alps. A slight drizzle they exaggerate to a perfect torrent; for with them it never rains but it pours. In picturing a female acquaintance, with however moderate pretensions to beauty, they constantly apply the well-worn similitude concerning angels. Their particular friends are patrons of virtue, their enemies monsters of wickedness. They see everything in ex-



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evils of war, and they will try to re
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swelled the list of killed and wounded—
if they can recollect none, then they can
not see why war should be so much con
demned, more particularly since they hap
pen to have a friend who made a fortune
as an army contractor, and gives capital
dinners. Such men, it will be observed,
never see things through the same medium
which the rest of the world does; there
is always a diminishing power which con
tracts their vision, and though aiming at
principles, they fasten on a mean set of
details. Many of this class are to be
found in the critical world. A swarm of
them fastened on the old English drama
tists at the end of the last century, wrote
voluminous commentaries on the mean
ing of single words, and indited portly
pamphlets to discuss whether we should
write *Shakspear* or *Shakspeare*. In modern
times, these minute observers discover, in
a new book, where the common have been

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Physicians, for instance, often s
medical spectacles. An esteeme
tudinarian, who has retired from medical
practice, invariably answers our ordinary
inquiry of "How do you do to-day?" with
a diagnosis of his complaints; and when
you succeed in drawing him out concern
ing the floating news of the day, he makes
especial inquiries after the "public health
in your neighborhood." He distinguishes
his friends not by their outward appear
ance or general dispositions, but by the
state of their health; and instead of call
ing people by their names, he talks of the
lady with the liver-complaint, the gentle
man afflicted with bronchitis, or that niece

which the word is used by many authors of high repute, both ancient and modern. Thus, Chaucer saith, that:—

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Few are, however, entirely without mental spectacles at some time of their lives—and how constantly are circumstances changing them! How apt are we to allow health or sickness, prosperity or misfortune, to place spectacles before our vision, which tinge everything around us with the prevailing feeling! In ill health, how "weary, flat, stale, and unprofitable" are the same objects from which, when in the full enjoyment of health, we derived pleasure and happiness. On the other hand, how many by no means romantic or picturesque scenes are hallowed in the recollection, when viewed through the spectacles created during some moment of delight enjoyed there—the society of a friend we have esteemed, or the smile of one we have loved!

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